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MONTANA MANPOWER

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PROJECTED MONTANA EMPLOYMENT

BY INDUSTRY AND SELECTED OCCUPATIONS

1970 - 1980

MONTANA STATE EMPLOYMENT SERVICE

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MONTANA MANPOWER

PROJECTED MONTANA EMPLOYMENT BY INDUSTRY AND SELECTED OCCUPATIONS

1970 - 1980

MONTANA STATE EMPLOYMENT SERVICE
EMPLOYMENT SECURITY DIVISION
DEPARTMENT OF LABOR AND INDUSTRY
Box 1728
Helena, Montana

Prepared by:
Research and Analysis
Montana State Employment Service

FEBRUARY 1973

Second Edition

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I. INTRODUCTION

In response to a growing need for detailed information on employment by occupation both now and in the future, the Montana Employment Service published "Montana Manpower, 1970 - 1975" to at least partially meet this need. It soon became apparent that periodic revision would be necessary in order to keep the data current with changing conditions.

This document is the second edition of "Montana Manpower" and is an attempt to provide a guide as to what industry and occupational profiles will be in 1980. To arrive at these forecasts of future manpower needs, average annual employment for the years 1957 through 1971 was projected to 1975 and 1980 using a least squares regression for each industry.

While the projections for each industry and occupation appear as specific numbers, they should not be considered precise due to limitations of the data and the risks inherent in any type of economic forecasting. However, the figures shown do provide a basic guide to the relative magnitude and direction of industrial and occupational changes that are expected to occur in the next four to nine years. The user can and should modify these figures on the basis of more detailed or recent information if it is available.

II. Summary and Conclusions

A. Employment by Industry 1960, 1970, 1975, and 1980[1/]

(In Thousands)

Industry	1960 Average Employment	1970 Average Employment	Projected 1975 Average Employment	Projected 1980 Average Employment	*Percent* Change 1970 to 1975	*Percen* Change 1975 t 1980
Civilian Work Force	253.9[2/]	278.4[2/]	293.0	305.1		
Unemployment	17.0	18.8	17.6	16.8		
Unemployment Rate as a Percent of Civilian Work Force	*6.7*	*6.7*	*6.0*	*5.5*		
Total Employment	236.0	259.5	275.4	288.3	*6.1*	*4.7*
Nonagricultural Wage & Salary	166.8	200.6	216.4	229.8	*7.9*	*6.2*
Manufacturing	20.4	23.6	24.9	26.3	*5.5*	*5.6*
Durable Goods	12.7	15.2	16.3	17.5	*7.2*	*7.4*
Nondurable Goods	7.7	8.4	8.6	8.8	*2.4*	*2.3*
Nonmanufacturing	146.4	177.0	191.5	203.5	*8.2*	*6.3*
Mining	7.4	6.7	5.8	5.7	*-13.4*	*-1.7*
Contract Construction	11.0	10.9	11.7	11.9	*7.3*	*1.7*
Transportation & Public Util.	19.0	17.2	17.3	17.4	*.6*	*.6*
Wholesale & Retail Trades	40.5	48.2	52.1	56.5	*8.1*	*8.4*
Finance, Insurance, Real Estate	6.9	8.1	8.3	8.7	*2.5*	*4.8*
Services	23.1	33.5	37.8	43.0	*12.8*	*13.8*
Government	38.5	52.4	58.5	60.3	*11.6*	*3.1*
All Other Nonag. Employment[3/]	30.2	25.8	25.0	25.0	*-3.1*	-
Agriculture	39.0	33.1	34.0	33.5	*2.7*	*-1.5*

1/ Refer to Appendix I, Table I, for detailed employment by industries.
2/ Includes persons involved in labor/management disputes.
3/ Includes nonagricultural self employed and unpaid family workers, and domestic workers in private households.

B. Montana Employment Trends Since 1940, and Anticipated Developments by Industry, 1970 Through 1980.

1. Total Employment

Total employment in Montana is expected to reach 275,400 persons by 1975, an increase of 15,900 or 6.1% over 1970. By 1980 total employment is expected to grow to nearly 288,300 or an 11.1% increase over 1970.

The growth of Montana's economy and likewise its work force has for years been slow and steady, yet lagging behind in comparison to the national rate of growth. This is at least partially due to Montana's large land area, sparse population and distance from major marketing centers. Its lack of primary industry results in slow recovery from economic recession periods, extreme seasonality in employment, and a higher than normal unemployment rate.

Montana's service and trade oriented economy has in the past and will probably continue to result in a lower per capita income than the national average along with a slower rate of increase in total personal income. For example, between 1960 and 1970 total personal income in the United States slightly more than doubled, whereas in Montana, personal income increased only 69%. Per capita income at $3,379 also falls short of the national average of $3,921.[1/]

2. Nonagricultural Wage and Salary Workers

a. Manufacturing

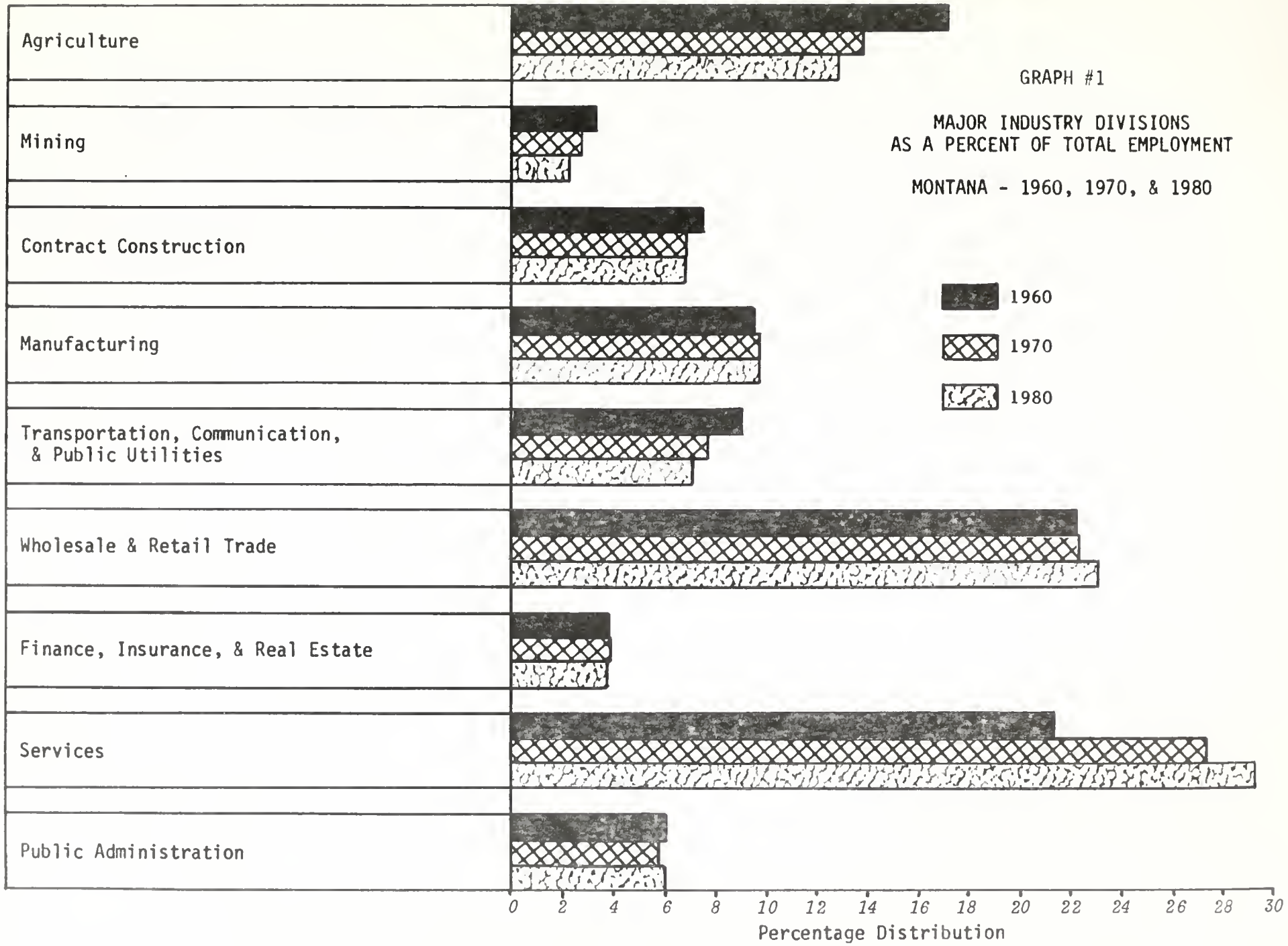
Manufacturing in Montana is, for the most part, confined to lumber and wood products (34% of all manufacturing employment), primary

1/ *Survey of Current Business, August 1971, published by U. S. Department of Commerce, Bureau of Economic Analysis.*

metals (20% of all manufacturing employment) and food and kindred products (18% of all manufacturing employment). These three industries combined account for more than 70% of Montana's manufacturing employment. The last ten years have reflected a slow, steady growth which is expected to continue through 1980 despite a slight downtrend during the 1969-1970 recession. Nearly all of the growth in manufacturing in recent years can be traced to the lumber and wood products, and primary metals industries. These two industries will have a pronounced effect on whether or not manufacturing employment continues to grow as it has in the past. Two factors may reverse the trends of recent years and both concern the effect of these two industries on the environment. Both are currently experiencing pressure from environmentalist groups which may have a significant effect on their future employment activities. In either case, the mix of manufacturing industries in Montana is expected to shift to a larger number of small, so-called "light manufacturing" companies during the next decade.

b. Mining

Mining employment since 1940 shows a nearly continuous downward trend. Peaking in 1942, employment declined during the war years until 1946. The next ten years reflected a gradual improvement until it peaked again in 1956, though considerably below 1942 levels. The change from underground to surface mining in the copper industry brought about a rapid decline in employment from 1956 to 1962, at which time the decline leveled off and has remained nearly the same since (except for strike years). If environmental requirements can be satisfied and extensive strip mining of Montana's coal reserves becomes a reality, the effect on employment is expected to be fairly substantial especially in localized areas.


GRAPH #1
MAJOR INDUSTRY DIVISIONS
AS A PERCENT OF TOTAL EMPLOYMENT
MONTANA - 1960, 1970, & 1980
1960
1970
1980
Agriculture
Mining
Contract Construction
Manufacturing
Transportation, Communication, & Public Utilities
Wholesale & Retail Trade
Finance, Insurance, & Real Estate
Services
Public Administration
Industry
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
Percentage Distribution

c. Contract Construction

While seasonal employment changes are very extreme, annual average employment levels since 1949, when plotted graphically, form a nearly horizontal line. This fact is in spite of large short term construction projects such as the Minuteman Missile Project, Yellowtail Dam, Libby Dam, Interstate Highway construction, etc. However, within the industry itself, employment in SIC 15, General Building Contractors, has been declining since 1960 while employment under SIC 16, Heavy Construction Contractors, increased during the same period. Most of these changes are felt to be a change in industry emphasis by general building contractors to take advantage of large construction projects, rather than an absolute change in the number of firms.

Because the level of construction activity is dependent to a large extent on federal spending policies, availability of money and the current interest rate, employment is difficult to predict on a long-term basis with any degree of reliability. However, the last twenty years seem to indicate that in spite of these factors, the annual average employment level has remained fairly constant and in all likelihood will remain at about this level through 1980.

d. Transportation and Public Utilities

This industry requires that each major sub-industry be analyzed separately:

1. Railroad Transportation has for the last twenty years or so been declining steadily due to the reduction in passenger service. While the decline is expected to continue, the rate of decline has moderated in recent years and should stabilize by 1980.

2. Transportation, except Railroads has increased slowly but steadily in recent years along with the increase in the demand for goods and services. This trend is expected to continue at about the same rate.

3. Communication and Utilities employment increased only slightly from 1960 to 1970, mostly due to the installation of automated equipment which eliminated the need for larger numbers of employees. However, this condition has now stabilized and the demand for services should result in a modest increase in the 1980 employment levels as compared to 1970.

e. Wholesale and Retail Trades

1. Wholesale Trade employment should continue to increase at a moderate rate through 1980.

2. Retail Trade employment increased dramatically between 1960 and 1970 especially in those sub-industries which are tourist oriented (i.e., SIC 58, Eating and Drinking Places). Local promotion of tourist oriented economy in Montana is expected to continue and with it an increase in tourist oriented industries such as retail trade.

f. Finance, Insurance and Real Estate

While Finance and Insurance will increase along with the increase in population, most of the employment gains in this industry will be from Real Estate speculation.

g. Services

In recent years the availability of money and more leisure time has increased the demand for services of all kinds. The obvious result was a dramatic increase in the number of jobs in these fields, particularly those

which are tourist oriented. This demand is expected to continue through the 1970's and employment in service industries will expand at a fairly rapid rate, reaching a total of 43,000 persons by 1980.

h. Government

The growth of government employment, particularly state and local has been fairly rapid during the last ten years. Most of this growth has resulted from the demand for educational services (schools) brought about by the post-war "baby boom". The most dramatic increase occurred between 1955 and 1968. Since 1968 total government employment has declined slightly (in response to the declining birthrate) and the rate of increase through 1980 is expected to fall somewhat short of the 1960 - 1970 period.

3. All Other Nonagricultural Employment

All other nonagricultural employment includes all self-employed and unpaid family workers, and domestic workers in private households. This group has declined slightly since 1960, mostly because of fewer unpaid family workers and domestics in private households. Unpaid family workers and domestics will continue to decline through 1980 but will be at least partially offset by increases in the numbers of self-employed workers.

4. Agriculture

Agriculture, Montana's largest export based industry in terms of employment, has for many years been the foundation of Montana's economy. In recent years, while agriculture's importance to Montana's economy in terms of personal income ($711,617,000 in 1971) continues to grow, the number of workers needed to produce agricultural products has been declining steadily. The reduction has been especially rapid in recent years as a result of mechanization.

In addition, the occupational structure has changed from unskilled workers to skilled mechanical occupations. The farm equipment mechanic and operator has emerged to replace the former unskilled farm or ranch worker. The current need for trained farm equipment mechanics and operators is expected to continue despite reduced employment and a surplus of unskilled farm workers.

C. Analysis of Occupational Changes, 1960 - 1970

Several rather significant occurrences shaped the occupational structure of Montana's work force during the decade from 1960 to 1970. First, the proportion of females in the work force increased from 29.5% to 35% primarily due to the popularity of two income families, and also the increases in clerical needs, service and retail trade industries created a large number of jobs customarily held by women. In addition, in spite of Montana's net out-migration rate of more than 5,700 per year, the pressures of urbanized living which plagued the large cities during the last decade attracted more and more people to the quiet pace of living in Montana. A large number of these were (and still are) professional and technically skilled people seeking to escape the inner-city. This, at least partially, accounted for the increase in the proportion of professional workers to total employed (Table X) and also the higher unemployment rate for this group (Table XII). The shift in occupational structure of Montana's work force (in terms of percent of total employment) from 1960 to 1970 resulted in a smaller proportion in nearly all blue collar and farm related occupations.

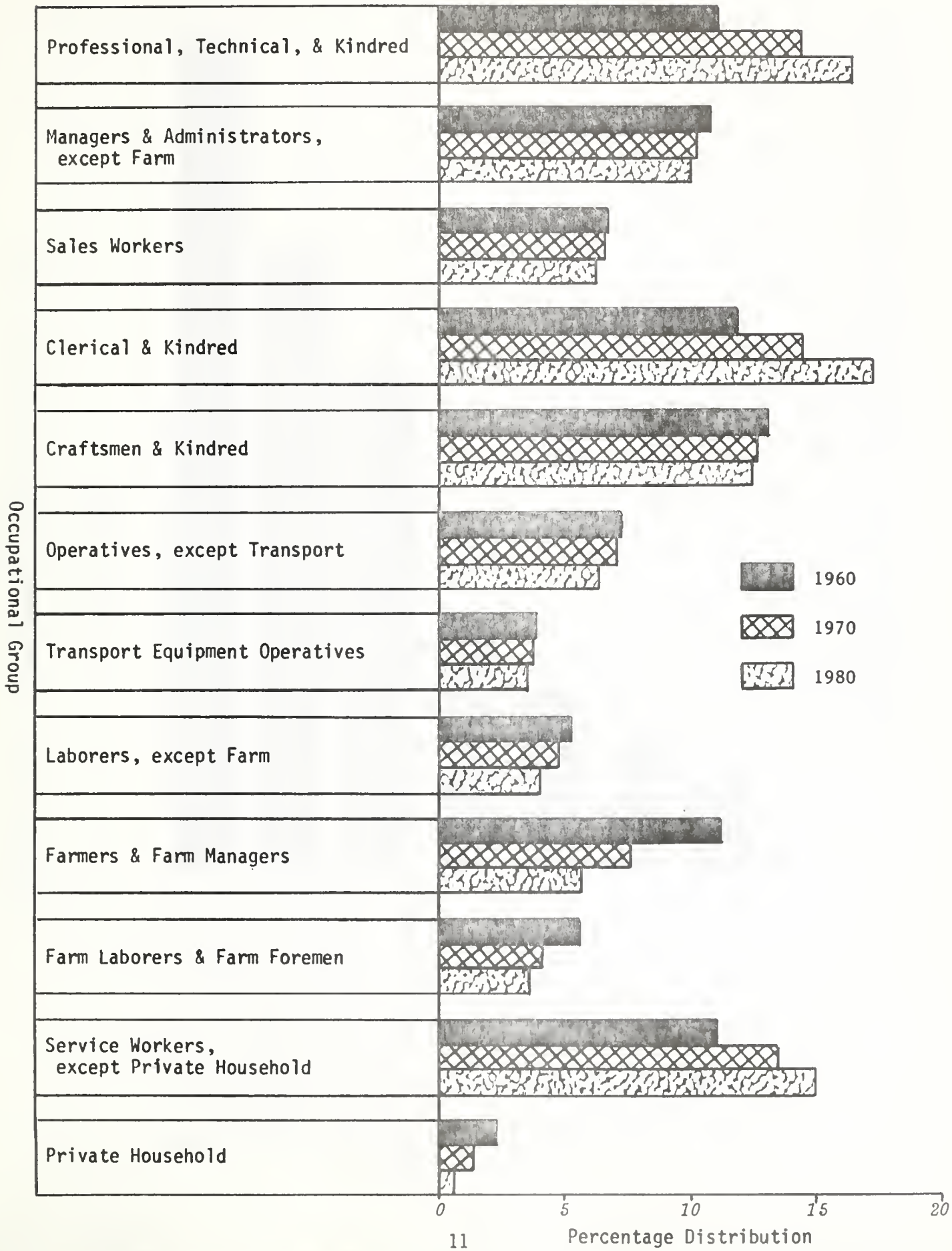
Farmers and farm managers experienced the largest decline, both in numbers and percent of total employment. In 1960, farmers and farm managers constituted

11.2% of total employment, but by 1970 had declined to 7.6%. Farm laborers and farm foremen declined 1.6%, from 5.6% to 4.0% of total employment (See Table X).

In fact, the only occupational groups that gained in terms of percent of total employment were (1) professional, technical and kindred, (2) clerical and kindred, and (3) service workers except private household. This further reinforces the fact that Montana's economy, and likewise the occupational structure of its work force is slowly becoming more service and retail trade oriented.

GRAPH #2

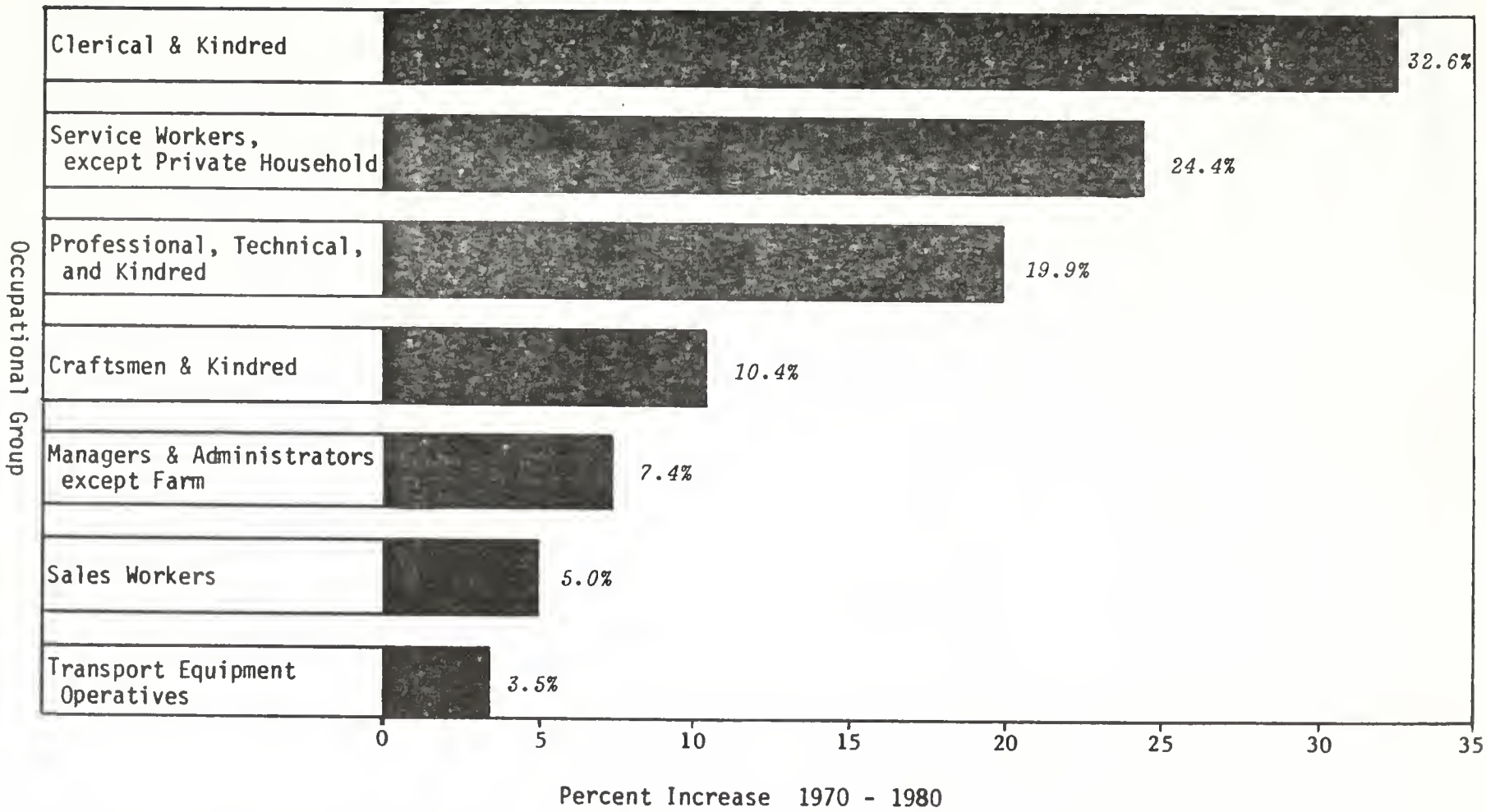
MAJOR OCCUPATIONAL GROUPS AS A PERCENT OF TOTAL EMPLOYMENT
MONTANA - 1960, 1970, & 1980



GRAPH #3

MONTANA INCREASE IN EMPLOYMENT BY SELECTED OCCUPATIONAL GROUPS

1970 - 1980[1/]



1/ *Laborers (except Farm), Farmers & Farm Managers, and Private Household Workers are not included as these groups show a decline from 1970 - 1980. Operatives (except Transport) and Farm Laborers & Farm Foremen also were not included since these groups show a change of less than .5 percent and hence regarded as stable from 1970 - 1980.*

D. Employment by Major Occupational Groups, and Anticipated Job Opportunities, 1970 - 1980

1. Professional, Technical and Kindred

During the ten year period from 1970 to 1980, employment in this group is expected to increase 19.9 percent over 1970 levels. Average annual openings should number about 2,220 jobs, nearly two-thirds of which will be replacement needs. The five following occupations will show the highest number of openings:

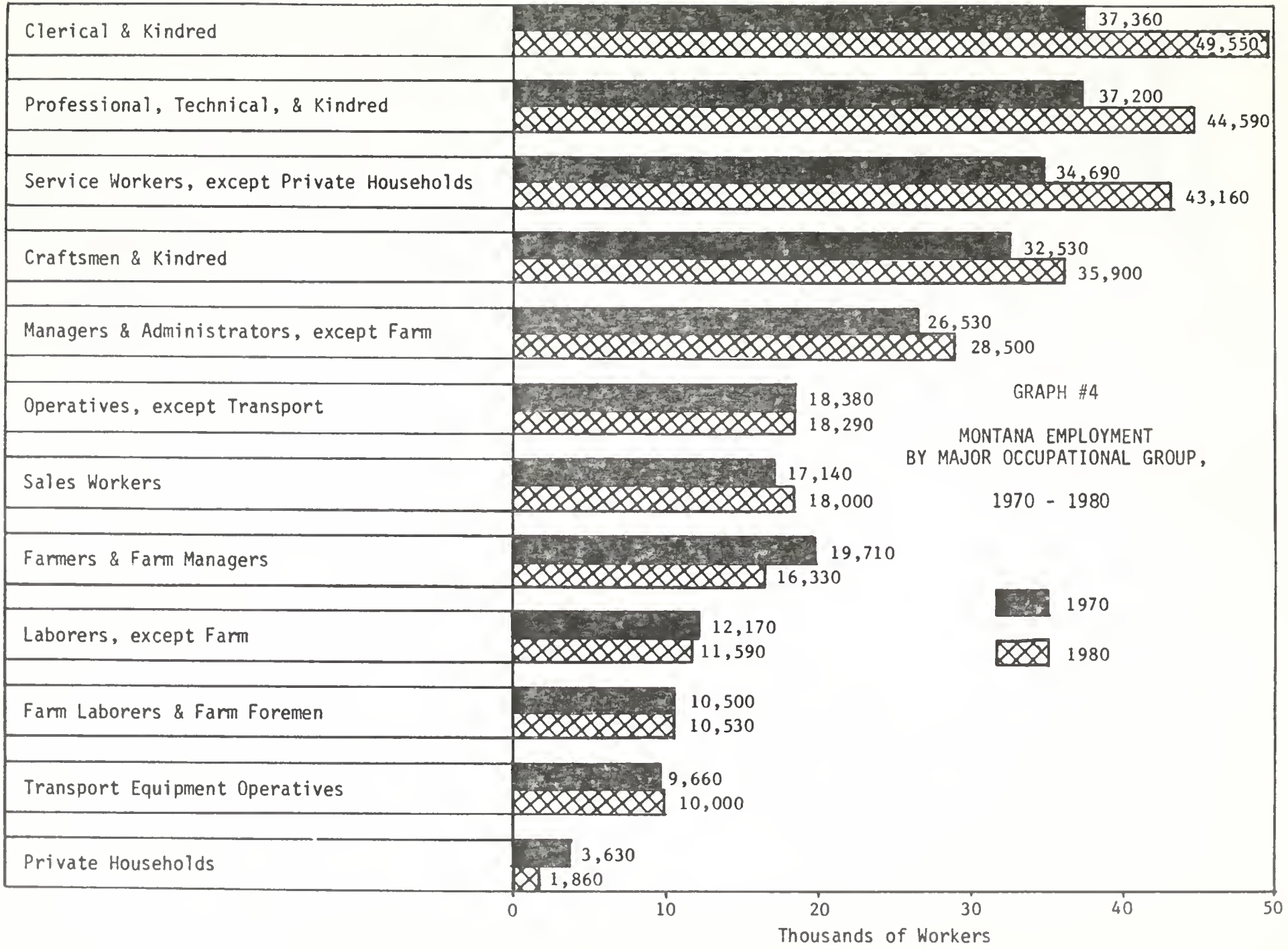
Occupation	1970 - 1980 Average Annual Openings
Elementary school teachers	420
Registered nurses	250
Secondary school teachers	180
Accountants	140
Engineering & science technicians	80

It should be noted, however, that the teaching field is experiencing minimal expansion at this time, and job opportunities are brought about by high turnover, as reflected by replacement needs. The supply of teachers still continues to exceed the demand.

Registered nurse positions lead in the moderately expanding health fields. Declines in the life and physical sciences are reflected especially in the occupations of chemist and geologist. Opportunities for draftsmen also should experience a slight decline.

2. Managers & Administrators, except Farm

Average annual openings are expected to exceed 1,110 for this occupational group in the decade of the seventies, while employment will grow by 7.4 percent


Clerical & Kindred
37,360
49,550
Professional, Technical, & Kindred
37,200
44,590
Service Workers, except Private Households
34,690
43,160
Craftsmen & Kindred
32,530
35,900
Managers & Administrators, except Farm
26,530
28,500
Operatives, except Transport
18,380
18,290
Sales Workers
17,140
18,000
Farmers & Farm Managers
19,710
16,330
Laborers, except Farm
12,170
11,590
Farm Laborers & Farm Foremen
10,500
10,530
Transport Equipment Operatives
9,660
10,000
Private Households
3,630
1,860
Occupational Group
0
10
20
30
40
50
Thousands of Workers
GRAPH #4
MONTANA EMPLOYMENT
BY MAJOR OCCUPATIONAL GROUP,
1970 - 1980
1970
1980

for the forecast period. Restaurant, cafeteria and bar managers will be in greater demand. Salaried managers and administrators will account for 300 openings per year, the majority of which will be in the wholesale and retail trades, and construction. Self-employed managers and administrators will undergo a cutback in opportunities in all industries, with 220 openings per year stemming from replacement needs as the only source.

3. Sales Workers

The ten year outlook seems best for sales representatives in the wholesale trades and sales clerks in the retail trades. High turnover rates for sales workers account for replacement needs of 660 openings per year, as the entire occupational group of sales workers will experience only a 5.0 percent growth in employment from 1970 to 1980.

4. Clerical and Kindred Workers

This particular occupational group will have the greatest increase in employment during the 1970 to 1980 period - 32.6 percent higher than the 1970 level. Both industrial expansion and high replacement needs are responsible for expectations of 3,110 job openings per year for the forecast period. The job outlook will be best in the following occupations:

Occupation	1970 - 1980 Average Annual Openings
Secretaries	900
Bookkeepers	410
Typists	250
Cashiers	160
Counter clerks, except food	150
Office machine operators	130
Receptionists	130

Only the occupations of ticket agents, messenger boys, and telegraph operators will not benefit from industrial expansion in the clerical fields.

5. Craftsmen and Kindred Workers

Employment in the craft occupations is anticipated to rise 10.4 percent over 1970 levels in the following ten years, with average annual openings numbering 940 jobs. Types of craftsmen needed most during the forecast period are listed below:

Occupation	1970 - 1980 Average Annual Openings
Automobile mechanics	150
Heavy equipment mechanics, including diesel	90
Foremen, n. e. c.	90
Excavating, grading and road machine operators, except bulldozer	90
Carpenters	80
Electricians	60

Many skilled workers learn the trades through informal on-the-job training and experience, while others learn through apprenticeship or other formal training programs. Skills acquired through the Armed Forces also may be adapted, with further training, to qualify for entrance into the skilled trades. However, long periods of training usually are required before the employee becomes a qualified journeyman.

6. Operatives, except Transport

This group will show a very slight decline in employment from 1970 to 1980, with replacement needs the lone contributor toward 380 job openings per year. Gas station attendants and welders and flamecutters will account for

more than one-quarter of the yearly openings. Mine operatives will continue to show a decline in employment from the 1970 level.

7. Transport Equipment Operatives

Bus drivers, delivery men and truck drivers will be the occupations supplying the majority of the 180 average annual job openings during the forecast period. Total 1980 employment in the transport equipment operatives is predicted to be 3.5 percent higher than 1970 figures.

8. Laborers, except Farm

Employment for off-farm laborers should continue to decline throughout the seventies, dropping from 12,170 in 1970 to 11,590 in 1980. Replacement needs are responsible for 190 average annual openings, 80 of which will be for stock handlers. Increased mechanization is causing greater dependence upon at least semi-skilled workers for almost every type of job. Many unskilled workers will be forced to change occupations or learn new skills as a result of technological advances.

9. Farmers and Farm Managers

Opportunities in the farm occupations are expected to follow a downward trend for the forecast period. Small family-owned farms and ranches continue to be consolidated. High turnover of tenant farmers and the demand for experienced, well-qualified farm managers influence replacement needs for this occupational group.

10. Farm Laborers and Farm Foremen

This category of workers should remain stable from 1970 to 1980, experiencing negligible growth and replacement needs supplying 290 average annual openings. Wage workers on farms account for three-fourths of the annual openings, with experienced irrigators, cattle feeders and general farm hands in greatest demand.

11. Service Workers, except Private Household

Employment for this group of workers should exhibit the second sharpest rise among occupation groups for the forecast period, topped only by the rise in employment of clerical and kindred workers. The 1980 employment will be 24.4 percent over 1970 levels for service workers, excluding private households. Average annual openings should number 2,960 jobs, with the job outlook best in the following occupations:

Occupation	1970 - 1980 Average Annual Openings
Waiters & Waitresses	500
Nursing aides, orderlies, attendants	390
Cooks, except private households	360
Janitors & sextons	350
Hairdressers and cosmetologists	200
Chambermainds & maids, except private households	150
Cleaners & charwomen	130
Bartenders	130
Child care workers, except private households	130

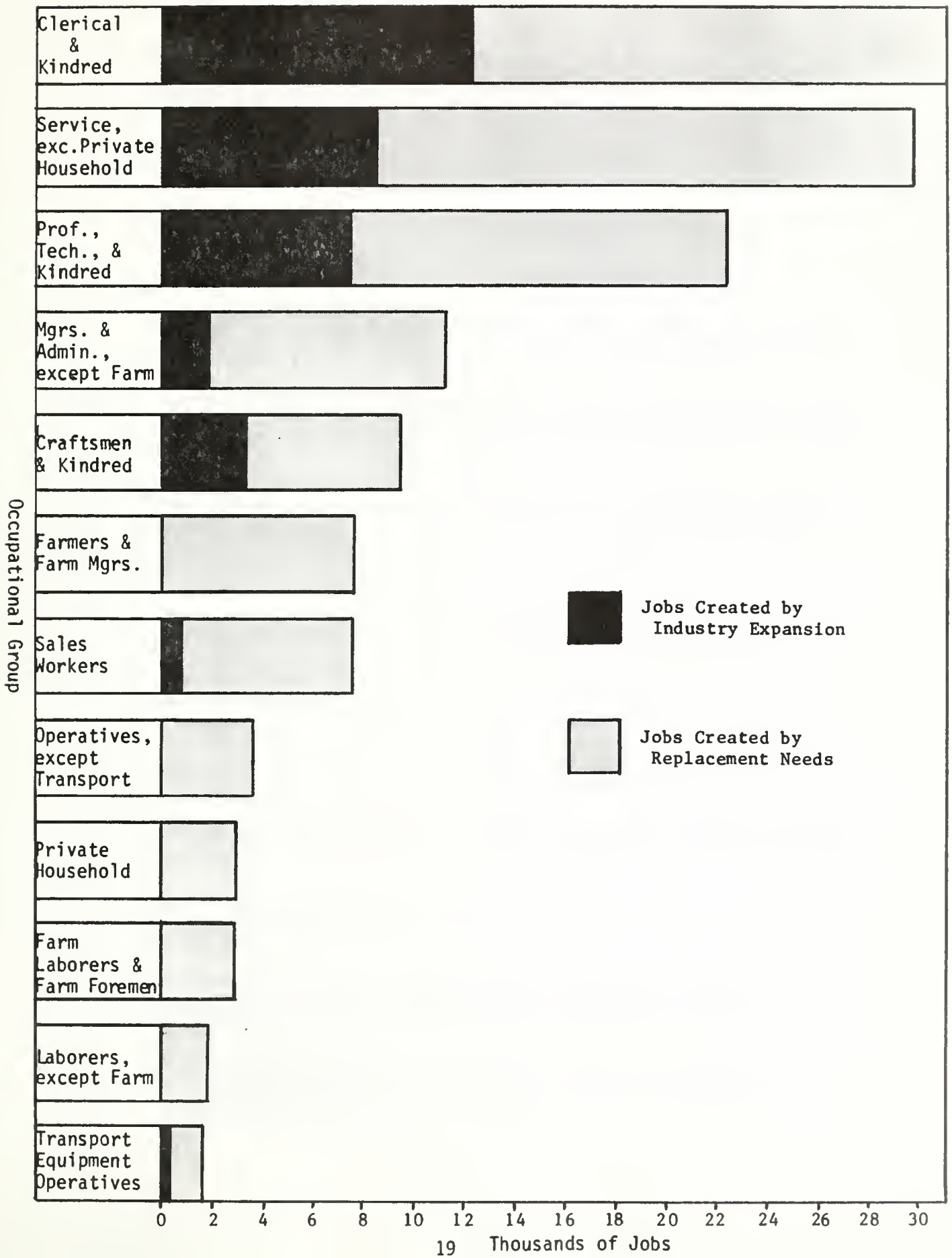
12. Private Household Workers

Employment of private household workers should rapidly decline from 3,630 in 1970 to 1,860 in 1980. Replacement needs alone account for 310 average annual openings, 280 of which are for child care workers and maids and servants in private households.

GRAPH #5

MONTANA JOB OPPORTUNITIES BY MAJOR OCCUPATIONAL GROUPS

1970 - 1980


Clerical & Kindred
Service, exc.Private Household
Prof., Tech., & Kindred
Mgrs. & Admin., except Farm
Craftsmen & Kindred
Farmers & Farm Mgrs.
Sales Workers
Operatives, except Transport
Private Household
Farm Laborers & Farm Foremen
Laborers, except Farm
Transport Equipment Operatives
Occupational Group
Jobs Created by Industry Expansion
Jobs Created by Replacement Needs
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
Thousands of Jobs

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APPENDIX I

STATISTICAL TABLES

TABLE I

MONTANA STATEWIDE WORK FORCE, BY INDUSTRY

1960, 1970, Projected 1975, and Projected 1980

(In Thousands)

Industry	1960 Average Employment	1970 Average Employment	Projected 1975 Average Employment	Projected 1980 Average Employment
Civilian Work Force	253.9[1/]	278.4[1/]	293.0	305.1
Unemployment	17.0	18.8	17.6	16.8
Unemployment Rate	*6.7*	*6.7*	*6.0*	*5.5*
Total Employment	236.0	259.5	275.4	288.3
Nonagricultural Wage & Salary	166.8	200.6	216.4	229.8
Manufacturing	20.4	23.6	24.9	26.3
Durable Goods	12.7	15.2	16.3	17.5
24 Lumber & Wood Products	7.3	8.1	8.7	9.3
33 Primary Metal Industries	3.8	4.6	4.9	5.3
Other Durable Goods	1.6	2.5	2.7	2.9
Nondurable Goods	7.7	8.4	8.6	8.8
20 Food & Kindred Products	4.3	4.3	4.4	4.5
27 Printing & Publishing	1.7	1.8	1.9	1.9
29 Petroleum & Coal Products	.9	1.1	1.1	1.2
Other Nondurable Goods	.8	1.2	1.2	1.2
Nonmanufacturing	146.4	177.0	191.5	203.5
Mining	7.4	6.7	5.8	5.7
10 Metal Mining	4.5	4.0	3.4	3.4
12 & 14 Bitum. Coal, Quarrying, Non-Metal Mining	.7	.9	.8	.8
13 Oil & Gas Extraction	2.2	1.8	1.6	1.5
Contract Construction	11.0	10.9	11.7	11.9
15 General Building Contractors	4.3	2.6	2.8	2.9
16 Heavy Construction Contractors	2.8	4.7	5.0	5.1
17 Special Trade Contractors	3.9	3.6	3.9	3.9

Industry	1960 Average Employment	1970 Average Employment	Projected 1975 Average Employment	Projected 1980 Average Employment
Transportation & Public Utilities	19.0	17.2	17.3	17.4
40 Railroad Transportation	9.0	6.6	6.0	5.5
41-47 Trans., except Railroads	4.0	4.5	4.8	5.1
48 & 49 Communication & Utilities	6.0	6.1	6.5	6.8
Wholesale & Retail Trades	40.5	48.2	52.1	56.5
Wholesale Trade	8.7	9.7	10.8	11.8
Retail Trade	31.8	38.5	41.3	44.7
53 & 56 Ret. Gen. Merch., Apparel	5.9	7.0	7.5	8.1
54 Food Stores	4.9	5.5	5.9	6.4
55 Auto Dealers, Service Stations	6.6	8.0	8.6	9.3
58 Eating & Drinking Places	7.8	10.4	11.2	12.1
52, 57, 59 Bldg. Mat. & Misc.	6.6	7.6	8.1	8.8
Finance, Insurance & Real Estate	6.9	8.1	8.3	8.7
Services	23.1	33.5	37.8	43.0
70 Hotels & Other Lodging Places	3.0	4.0	4.5	5.1
72 Personal Services	2.1	2.4	2.7	3.1
Other Services	18.0	27.1	30.6	34.8
Government	38.5	52.4	58.5	60.3
91 Federal Government	9.9	11.7	11.7	11.5
92 & 93 State & Local Government	28.6	40.7	46.8	48.8
All Other Nonagricultural Employment[2/]	30.2	25.8	25.0	25.0
Agriculture	39.0	33.1	34.0	33.5

1/ *Includes persons involved in labor/management disputes.*
2/ *Includes nonagricultural self employed and unpaid family workers, and domestic workers in private households.*

TABLE II

EMPLOYMENT BY MAJOR INDUSTRY DIVISIONS

As a Percent of Total Employment in Montana[1/]

1960, 1970, 1975, and 1980

Industry	Percent of Total Employment 1960	Percent of Total Employment 1970	Percent of Total Employment 1975	Percent of Total Employment 1980
Total Employment	100.0	100.0	100.0	100.0
Agriculture	17.2	13.8	13.4	12.7
Mining	3.3	2.7	2.2	2.1
Contract Construction	7.5	6.8	6.9	6.7
Manufacturing	9.5	9.7	9.6	9.6
Transportation, Communication, and Public Utilities	9.1	7.6	7.3	7.0
Wholesale and Retail Trade	22.2	22.4	22.4	23.0
Finance, Insurance, and Real Estate	3.8	3.9	3.8	3.7
Services	21.4	27.4	28.4	29.3
Public Administration	6.0	5.7	6.0	5.9

1/ *Total Employment resulted from distribution of Government, Self-Employed and Unpaid Family Workers so that industry detail would match National industry Data. (See Tables V, VI, VII, and VIII.)*

TABLE III

PROJECTED EMPLOYMENT IN 1975, BY INDUSTRY

With Upper and Lower Limits

(In Thousands)

Industry	Lower Limit[2]	Preliminary 1975 Projection[1]	Upper Limit[2]	Final 1975 Projection
Civilian Work Force	292.3	298.3	304.3	293.0
Unemployed	17.5	17.9	18.3	17.6
Unemployment Rate				*6.0*
Total Employment	274.8	280.4	286.0	275.4
Nonagricultural Wage & Salary	209.6	213.0	216.4	216.4
Mining	4.7	5.6	6.4	5.8
Contract Construction	10.1	11.4	12.7	11.7
Manufacturing	23.2	24.5	25.8	24.9
Durable Goods	14.8	16.0	17.3	16.3
Nondurable Goods	8.2	8.4	8.7	8.6
Transportation & Public Utilities	16.2	16.7	17.3	17.3
Railroads	5.5	5.7	6.0	6.0
Other Trans. & Public Utilities	10.7	11.0	11.3	11.3
Wholesale & Retail Trades	48.4	49.5	50.5	52.1
Wholesale Trade	9.4	9.8	10.2	10.8
Retail Trade	38.7	39.7	40.7	41.3
Finance, Insurance & Real Estate	8.0	8.3	8.6	8.3
Services	33.9	35.8	37.8	37.8
Government	58.5	60.3	62.1	58.5
Federal Government	11.6	13.0	14.5	11.7
State & Local Government	45.3	46.8	48.3	46.8
All Other Nonagricultural Employment				25.0
Agriculture	32.0	33.8	35.6	34.0

1/ Individual industries will not add to totals. These figures were "forced" to the figures appearing in the Final 1975 Projection.

2/ Individual industries will not add to totals due to differences in correlation coefficients.

TABLE IV

PROJECTED EMPLOYMENT IN 1980, BY INDUSTRY

With Upper and Lower Limits

(In Thousands)

Industry	Lower Limit[2]	Preliminary 1980 Projection[1]	Upper Limit[2]	Final 1980 Projection
Civilian Work Force	302.2	310.3	318.3	305.1
Unemployed	16.6	17.1	17.5	16.8
Unemployment Rate				5.5
Total Employment	285.6	293.2	300.8	288.3
Nonagricultural Wage & Salary	219.0	223.3	227.6	229.8
Mining	3.8	4.9	6.1	5.7
Contract Construction	10.4	11.7	13.0	11.9
Manufacturing	23.5	25.1	26.8	26.3
Durable Goods	15.0	16.5	18.0	17.5
Nondurable Goods	8.2	8.5	8.9	8.8
Transportation & Public Utilities	15.9	16.6	17.4	17.4
Railroads	4.9	5.2	5.5	5.5
Other Trans. & Public Utilities	11.0	11.4	11.9	11.9
Wholesale & Retail Trades	49.6	50.8	52.1	56.5
Wholesale Trade	9.6	10.1	10.6	11.8
Retail Trade	39.6	40.7	41.9	44.7
Finance, Insurance & Real Estate	8.3	8.7	9.1	8.7
Services	37.5	40.2	43.0	43.0
Government	61.0	63.1	65.2	60.3
Federal Government	11.9	13.8	15.8	11.5
State & Local Government	47.1	48.8	50.5	48.8
All Other Nonagricultural Employment				25.0
Agriculture	30.2	32.5	34.8	33.5

1/ Individual industries will not add to totals. These figures were "forced" to the figures appearing in the Final 1980 Projection.

2/ Individual industries will not add to totals due to differences in correlation coefficients.

TABLE V

TOTAL EMPLOYMENT IN 1960, BY INDUSTRY

(Distribution of Government and All Other Nonagricultural Employment)

(In Thousands)

Industry	1960 Average Employment	Self-Employed & Unpaid Family[1/]	Gov't.[1/]	Total Industry Employment[2/]
Civilian Work Force	253.9[3/]			253.9[3/]
Unemployed	17.0			17.0
Unemployment Rate	*6.7*			*6.7*
Total Employment	236.0			236.0
Nonagricultural Wage & Salary	166.8	30.2	(1.7)	195.3
Mining	7.4	.4	-	7.8
Contract Construction	11.0	3.5	3.2	17.7
Manufacturing	20.4	1.9	.1	22.4
Durable Goods	12.7	1.2	-	13.9
Nondurable Goods	7.7	.7	.1	8.5
Transportation & Public Utilities	19.0	1.0	1.4	21.4
Railroads	9.0	-	-	9.0
Other Trans. & Public Utilities	10.0	1.0	1.4	12.4
Wholesale & Retail Trade	40.5	11.4	.4	52.3
Wholesale Trade	8.7	1.2	-	9.9
Retail Trade	31.8	10.2	.4	42.4
Finance, Insurance & Real Estate	6.9	1.7	.3	8.9
Services	23.1	10.3	17.2	50.6
Public Administration	-	-	14.2	14.2
All Other Nonagricultural Employment	30.2	(30.2)		
Agriculture	39.0		1.7	40.7
Government	38.5		(38.5)	
Federal Government	9.9			
State & Local Government	28.6			

1/ *Distribution based on ratios from 1960 Census.*

2/ *Total Industry Employment resulted from distribution of Government, Self-Employed, and Unpaid Family Workers so that industry detail would match National industry data.* *(See Page II-1)*

3/ *Includes persons involved in labor/management disputes.*

TABLE VI

TOTAL EMPLOYMENT IN 1970, BY INDUSTRY

(Distribution of Government and All Other Nonagricultural Employment)

(In Thousands)

Industry	1970 Average Employment	Self-Employed & Unpaid Family[1/]	Gov't.[1/]	Total Industry Employment[2/]
Civilian Work Force	278.4[3/]			278.4[3/]
Unemployed	18.8			18.8
Unemployment Rate	*6.7*			*6.7*
Total Employment	259.5			259.5
Nonagricultural Wage & Salary	200.6	25.8	(2.6)	223.8
Mining	6.7	.3	.1	7.1
Contract Construction	10.9	3.0	3.9	17.8
Manufacturing	23.6	1.3	.2	25.1
Durable Goods	15.2	.9	.1	16.2
Nondurable Goods	8.4	.4	.1	8.9
Transportation & Public Utilities	17.2	.9	1.7	19.8
Railroads	6.6	-	-	6.6
Other Trans. & Public Utilities	10.6	.9	1.7	13.2
Wholesale & Retail Trade	48.2	9.3	.5	58.0
Wholesale Trade	9.7	.8	-	10.5
Retail Trade	38.5	8.5	.5	47.5
Finance, Insurance & Real Estate	8.1	1.5	.5	10.1
Services	33.5	9.5	28.0	71.0
Public Administration	-	-	14.9	14.9
All Other Nonagricultural Employment	25.8	(25.8)		
Agriculture	33.1		2.6	35.7
Government	52.4		(52.4)	
Federal Government	11.7			
State & Local Government	40.7			

1/ *Distribution based on ratios from 1970 Census.*

2/ *Total Industry Employment resulted from distribution of Government, Self-Employed, and Unpaid Family Workers so that industry detail would match National industry data. (See Page II-1)*

3/ *Includes persons involved in labor/management disputes.*

TABLE VII

TOTAL PROJECTED EMPLOYMENT IN 1975, BY INDUSTRY

(Distribution of Government and All Other Nonagricultural Employment)

(In Thousands)

Industry	Final 1975 Projection	Self-Employed & Unpaid Family[1/]	Gov't.[1/]	Total Industry Employment[2/]
Civilian Work Force	293.0			293.0
Unemployed	17.6			17.6
Unemployment Rate	*6.0*			*6.0*
Total Employment	275.4			275.4
Nonagricultural Wage & Salary	216.4	25.0	(3.0)	238.4
Mining	5.8	.3	.1	6.2
Contract Construction	11.7	2.9	4.3	18.9
Manufacturing	24.9	1.3	.2	26.4
Durable Goods	16.3	.9	.1	17.3
Nondurable Goods	8.6	.4	.1	9.1
Transportation & Public Utilities	17.3	.8	1.9	20.0
Railroads	6.0	-	-	6.0
Other Trans. & Public Utilities	11.3	.8	1.9	14.0
Wholesale & Retail Trade	52.1	9.0	.6	61.7
Wholesale Trade	10.8	.7	.1	11.6
Retail Trade	41.3	8.3	.5	50.1
Finance, Insurance & Real Estate	8.3	1.5	.6	10.4
Services	37.8	9.2	31.2	78.2
Public Administration	-	-	16.6	16.6
All Other Nonagricultural Employment	25.0	(25.0)		
Agriculture	34.0		3.0	37.0
Government	58.5		(58.5)	
Federal Government	11.7			
State & Local Government	46.8			

1/ *Distribution based on ratios from 1970 Census.*

2/ *Total Industry Employment resulted from distribution of Government, Self-Employed, and Unpaid Family Workers so that industry detail would match National industry data.* *(See Page II-1)*

TABLE VIII

TOTAL PROJECTED EMPLOYMENT IN 1980, BY INDUSTRY

(Distribution of Government and All Other Nonagricultural Employment)

(In Thousands)

Industry	Final 1980 Projection	Self-Employed & Unpaid Family[1]	Gov't.[1]	Total Industry Employment[2]
Civilian Work Force	305.1			305.1
Unemployed	16.8			16.8
Unemployment Rate	5.5			5.5
Total Employment	288.3			288.3
Nonagricultural Wage & Salary	229.8	25.0	(3.1)	251.7
Mining	5.7	.3	.1	6.1
Contract Construction	11.9	2.9	4.5	19.3
Manufacturing	26.3	1.3	.2	27.8
Durable Goods	17.5	.9	.1	18.5
Nondurable Goods	8.8	.4	.1	9.3
Transportation & Public Utilities	17.4	.8	2.0	20.2
Railroads	5.5	-	-	5.5
Other Trans. & Public Utilities	11.9	.8	2.0	14.7
Wholesale & Retail Trade	56.5	9.0	.6	66.1
Wholesale Trade	11.8	.7	.1	12.6
Retail Trade	44.7	8.3	.5	53.5
Finance, Insurance & Real Estate	8.7	1.5	.6	10.8
Services	43.0	9.2	32.1	84.3
Public Administration	-	-	17.1	17.1
All Other Nonagricultural Employment	25.0	(25.0)		
Agriculture	33.5		3.1	36.6
Government	60.3		(60.3)	
Federal Government	11.5			
State & Local Government	48.8			

1/ *Distribution based on ratios from 1970 Census.*

2/ *Total Industry Employment resulted from distribution of Government, Self-Employed, and Unpaid Family Workers so that industry detail would match National industry data.* *(See Page II-1)*

TABLE IX

MONTANA TOTAL EMPLOYMENT BY INDUSTRY - 1960, 1970, 1975, and 1980

INDUSTRY	S. I. C. Code	Average Employment 1960[1]	Average Employment 1970[1]	Average Employment 1975[1]	Average Employment 1980[1]
INDUSTRY, TOTAL		236,000	259,500	275,400	288,300
AGRI., FORESTRY & FISHERIES	A	40,700	35,700	37,000	36,600
Agriculture	01,02,07, exc. 0713	39,360	33,060	34,260	33,890
Forestry	08	1,260	2,600	2,700	2,670
Fisheries	09	80	40	40	40
MINING	B	7,800	7,100	6,200	6,100
Metal Mining	10	4,800	4,170	3,650	3,580
Coal Mining	11, 12	190	160	140	140
Crude Petroleum & Nat. Gas	13	1,960	2,230	1,940	1,910
Quarrying & Non-Metal Mining	14	850	540	470	470
CONSTRUCTION	C (15-17)	17,700	17,800	18,900	19,300
MANUFACTURING	D	22,400	25,100	26,400	27,800
Durable Goods Manufacturing	19, 24, 25, 32-39	13,900	16,200	17,300	18,500
Lumber & Wood Prod.exc.Furn.	24	6,630	7,580	8,090	8,650
Logging Camps & Contractors	241	1,390	1,470	1,570	1,670
Sawmills,Millwk,Misc.Prod.	242, 244, 249	5,240	6,110	6,520	6,980
Furniture & Fixtures	25	120	140	150	160
Stone, Clay, Glass Prod.	32	780	830	890	960
Glass & Glass Prod.	321-3	20	0	0	0
Cement,Concrete,Plaster	324-7	640	660	700	750
Structural Clay Prod.	325	80	20	30	30
Pottery & Related Prod.	326	0	0	0	10
Misc.NonMet.Min,Stone Prod.	328, 9	40	150	160	170
Primary Metals Industries	33	4,830	5,060	5,400	5,780
Blast Furnaces,Steel Works	3312, 3	20	40	40	50
Other Prim.Metals Ind.	3315-7,332,3391,9	100	50	50	50
Primary Non-Ferrous Metal	333-6, 3392	4,710	4,970	5,310	5,680
Fabricated Metal Products	34, 19, exc. 194	330	1,080	1,150	1,230
Machinery, exc. Electrical	35	580	540	570	610
Farm Mach. & Equip.	352	70	140	150	160
Office Machinery	357	90	80	80	90
Misc. Machinery	351, 3-6, 8, 9	420	320	340	360
Electrical Mach,Equip,Supp.	36	150	120	130	140
Transportation Equip.	37	200	370	400	430
Motor Vehicles & Equip.	371	40	60	60	70
Aircraft & Parts	372	30	70	80	80
Ship & Boat Building	373	90	60	60	60
R.R. & Other Trans.Equip.	374, 5, 9	40	180	200	220
Instruments & Allied Prod.	38	60	100	100	110
Instruments & Fire Control	381-6, 194	60	100	100	110
Watches & Clock Devices	387	0	0	0	0
Misc. Manufacturing	39	220	380	420	430

TABLE IX

MONTANA TOTAL EMPLOYMENT BY INDUSTRY - 1960, 1970, 1975, and 1980

INDUSTRY	S. I. C. Code	Average Employment 1960[1]	Average Employment 1970[1]	Average Employment 1975[1]	Average Employment 1980[1]
Nondurable Goods Manufact'g.	20-23, 26-31	8,500	8,900	9,100	9,300
Food & Kindred Prod.	20	3,860	3,360	3,430	3,510
Meat Prod.	201	690	960	980	1,000
Dairy Prod.	202	850	570	580	590
Canning,Preserving,Freezing	203	70	50	50	50
Grain Mill Prod.	204	440	460	470	480
Bakery Prod.	205	880	370	380	400
Beverage Ind.	208	400	290	290	300
Other Food Prod.	206, 7, 9	530	660	680	690
Tobacco Manufacturing	21	30	20	20	20
Textile Mill Prod.	22	20	110	110	110
Apparel & Related Prod.	23	80	140	150	150
Paper & Allied Prod.	26	160	430	440	450
Pulp,Paper,Paperboard Mills	261-3, 6	160	400	410	420
Paperbd.Containers,Boxes	265	0	20	20	20
All Other Paper Prod.	264	0	10	10	10
Printing,Pubshg,Allied Prod.	27	2,470	3,250	3,320	3,390
Chemicals,Allied Prod.	28	410	560	570	580
Synthetic Fibers	2823, 4	10	0	0	0
Drugs & Medicine	283	50	40	40	40
Paints,Varnishes,Rel. Prod.	285	20	40	40	40
Other Chemicals	281, 2821, 2	330	480	490	500
Petroleum Refining, Rel. Ind.	29	1,380	950	970	990
Petroleum Refining	291	1,370	930	950	970
Other Petrol. & Coal Prod.	295, 9	10	20	20	20
Rubber, Misc.Plastic Prod.	30	70	30	30	40
Rubber Prod.	301-3, 6	50	10	10	10
Misc. Plastic Prod.	307	20	20	20	30
Leather, Leather Prod.	31	20	50	60	60
Leather Tanning,Finishing	311	0	0	0	0
Footwear, exc. Rubber	313, 4	10	20	30	30
All Other Leather Prod.	312, 5-7, 9	10	30	30	30
TRANS,COMMUN,PUB.UTILITIES	E (40-49)	21,400	19,800	20,000	20,200
Transportation	40-47	13,960	11,990	11,710	11,500
Railroad Trans.	40	9,000	6,600	6,000	5,500
Local & Suburb. Trans., Interurb. Passgr. Trans.	41	870	1,020	1,080	1,130
Local&Interurb.exc.Taxis	411, 3-5, 7	630	810	850	890
Taxis	412	240	210	230	240
Motor Freight Tr.& Storage	42	3,440	3,490	3,700	3,880
Trucking	421, 3	3,080	3,050	3,230	3,390
Warehousing	422	360	440	470	490
Water Transportation	44	20	20	20	20
Transportation by Air	45	440	640	680	720
Pipelines	46	100	80	90	100
Transportation Services	47	90	140	140	150

TABLE IX

MONTANA TOTAL EMPLOYMENT BY INDUSTRY - 1960, 1970, 1975, and 1980

INDUSTRY	S. I. C. Code	Average Employment 1960[1/]	Average Employment 1970[1/]	Average Employment 1975[1/]	Average Employment 1980[1/]
Communication & Pub.Utilities	48-49	7,440	7,810	8,290	8,700
Communication	48	3,840	3,450	3,660	3,840
Telephone	481	3,230	2,540	2,700	2,830
Telegraph	482, 9	100	220	230	240
Radio & Television	483	510	690	730	770
Electric,Gas,Sanitary Serv.	49	3,600	4,360	4,630	4,860
Electric,Gas,Steam	491-3, 6	2,860	3,410	3,630	3,800
Water & Irrigation	494, 7	390	520	550	580
Sanitary Services	495	350	430	450	480
WHOLESALE & RETAIL TRADE	F (50-59)	52,300	58,000	61,700	66,100
Wholesale Trade	50	9,900	10,500	11,600	12,600
Motor Vehicles & Equip.	501	730	1,080	1,190	1,290
Drugs & Chemicals	502	370	360	400	440
Dry Goods & Apparel	503	100	70	80	90
Groceries & Related	504	1,890	1,920	2,120	2,300
Elec.Goods,Plumb.& Heatg.Sup.	506-7	990	860	950	1,030
Machinery & Equip.	508	1,030	1,650	1,830	1,980
Farm Produce & Misc.	505, 9	4,790	4,560	5,030	5,470
Retail Trade	52-59	42,400	47,500	50,100	53,500
Bldg.Mat.,Hardware,Farm Equip	52	4,570	3,970	4,190	4,480
General Merchandise	53	4,550	5,410	5,700	6,090
Limited Price Stores	533	790	690	720	780
Other General Merchandise	53 exc. 533	3,760	4,720	4,980	5,310
Food & Drug Stores	54	6,280	6,970	7,360	7,850
Auto Dealers & Gas Stations	55	7,200	8,640	9,120	9,740
Auto Dealers	55 exc. 554	3,940	4,700	4,960	5,300
Gas Stations	554	3,260	3,940	4,160	4,440
Apparel & Accessories	56	2,150	2,110	2,220	2,380
Furniture, etc.	57	1,870	2,040	2,150	2,300
Eating & Drinking Places	58	10,450	12,540	13,230	14,120
Misc. Retail Stores	59	5,330	5,820	6,130	6,540
Drug Stores	591	1,560	1,400	1,470	1,570
Other Retail Stores	59 exc. 591	3,770	4,420	4,660	4,970
FINANCE,INSURANCE,REAL ESTATE	G (60-67)	8,900	10,100	10,400	10,800
Finance	60, 61, 62, 67	3,740	4,750	4,890	5,090
Bank & Credit Agencies	60, 61	3,280	4,280	4,400	4,580
Stock Brokers & Invest. Co.	62, 67	460	470	490	510
Insurance	63, 64	2,930	3,210	3,310	3,420
Real Estate	65, 66	2,230	2,140	2,200	2,290

TABLE IX

MONTANA TOTAL EMPLOYMENT BY INDUSTRY - 1960, 1970, 1975, and 1980

INDUSTRY	S. I. C. Code	Average Employment 1960[1]	Average Employment 1970[1]	Average Employment 1975[1]	Average Employment 1980[1]
SERVICES	H (70,72,73,75,76,78-82,84,86,88,89)	50,600	71,000	78,200	84,300
Private Household	88	5,710	3,860	4,250	4,580
Services, exc. Private Hshd.	H (70,72,73,75,76, 78-82, 84, 86, 89)	44,890	67,140	73,950	79,720
Hotels,Other Lodging Places	70	3,500	4,640	5,110	5,510
Personal Services	72	4,180	4,420	4,870	5,250
Laundry,Cleaning,Valet	721, 7	1,660	1,490	1,640	1,770
All Other Personal Serv.	722-6, 9	2,520	2,930	3,230	3,480
Misc. Business Serv.	73	1,190	2,220	2,450	2,640
Advertising	731-6, 9	110	160	180	190
Other Misc. Business Serv.	732-6, 9	1,080	2,060	2,270	2,450
Auto Repair Serv.,Garage	75	2,270	2,190	2,410	2,600
Misc. Repair Serv.	76	1,150	1,340	1,480	1,600
Entertainment & Recreation	78, 79	1,800	2,030	2,240	2,410
Motion Pictures & Theaters	78, 792	750	730	810	870
Misc. Ent. & Rec.	793, 1, 4	1,050	1,300	1,430	1,540
Medical & Other Health Serv.	80	10,520	15,740	17,340	18,690
Hospitals	806	6,650	9,740	10,730	11,560
Other Med. & Health Serv.	80, exc. 806	3,870	6,000	6,610	7,130
Legal Services	81	960	1,260	1,390	1,500
Educational Services	82, 84	14,470	26,770	29,480	31,780
NonProfit Membership Orgnzn.	86	3,510	4,570	5,040	5,430
Welfare & Religious	866, 7	2,390	3,240	3,570	3,840
Other NonProfit	861-5, 9	1,120	1,330	1,470	1,590
Misc. Services	89	1,340	1,960	2,140	2,310
Engineering & Architecture	891	520	680	740	800
Accounting & Bookkeeping	893	580	940	1,030	1,120
All Other Professional Serv.	892, 9	240	340	370	390
PUBLIC ADMINISTRATION	I (91-94)	14,200	14,900	16,600	17,100
Postal Services	91	2,570	2,590	2,890	2,970
Other Federal Public Adminis.	94	4,690	5,210	5,800	5,990
State Government	92	2,290	2,600	2,900	2,980
Local Government	93	4,650	4,500	5,010	5,160

1/ Average employment figures by industry differ from Table I in that Government, Self-Employed and Unpaid Family workers were distributed to match industry detail with National industry data. (Census)

TABLE X

EMPLOYMENT BY OCCUPATIONAL GROUP

As a Percent of Total Employment in Montana

1960, 1970, and 1980

Occupational Group	Percent of Total Employment 1960	Percent of Total Employment 1970	Percent of Total Employment 1980
TOTAL EMPLOYMENT	*100.0*	*100.0*	*100.0*
Professional, Technical & Kindred	*11.1*	*14.3*	*15.5*
Managers & Administrators, except Farm	*10.8*	*10.2*	*9.9*
Sales Workers	*6.7*	*6.6*	*6.2*
Clerical & Kindred	*11.8*	*14.4*	*17.2*
Craftsmen & Kindred	*13.1*	*12.6*	*12.5*
Operatives, except Transport	*7.2*	*7.1*	*6.3*
Transport Equipment Operatives	*3.9*	*3.7*	*3.5*
Laborers, except Farm	*5.3*	*4.7*	*4.0*
Farmers & Farm Managers	*11.2*	*7.6*	*5.7*
Farm Laborers & Farm Foremen	*5.6*	*4.0*	*3.6*
Service Workers, except Private Household	*11.0*	*13.4*	*15.0*
Private Household	*2.3*	*1.4*	*.6*

TABLE XI

SELECTED OCCUPATIONS, BY OCCUPATIONAL GROUP
having
Average Annual Openings of 100 or More

Occupation	Average Annual Openings
Professional, Technical & Kindred Workers	
Accountants	140
Registered nurses	250
Elementary school teachers	420
Secondary school teachers	180
Managers & Administrators, except Farm	
Restaurant, cafeteria and bar managers	140
Sales Workers	
Sales representatives, wholesale trade	100
Sales clerks, retail trade	400
Clerical & Kindred Workers	
Bookkeepers	410
Cashiers	160
Counter clerks, except food	150
Office machine operators	130
Receptionists	130
Secretaries	900
Typists	250
Not specified clerical workers	130
Craftsmen & Kindred Workers	
Mechanics & repairmen	380
Automobile mechanics	150
Operatives, except Transport	
Miscellaneous machine operatives	100
Farmers & Farm Managers	
Farm managers	170
Farm Laborers	
Farm laborers, wage workers	220
Service Workers, except Private Household	
Chambermaids & maids, except private household	150
Cleaners & charwomen	130
Janitors & sextons	350
Bartenders	130
Cooks,except private households	360
Waiters & waitresses	500
Nursing aides, orderlies, attendants	390
Child care workers, except private household	130
Hairdressers & cosmetologists	200
Private Household Workers	
Child care workers, private household	180
Maids & servants, private household	100

TABLE XII

MONTANA UNEMPLOYMENT RATES BY OCCUPATIONAL GROUP

1960 and 1970

Occupational Group	Percent Unemployed 1960	Percent Unemployed 1970
Professional, Technical & Kindred	1.8	2.2
Managers & Administrators, except Farm	1.5	1.6
Sales Workers	5.1	4.0
Clerical & Kindred	4.6	4.9
Craftsmen & Kindred	7.5	6.7
Operatives, except Transport	10.0	8.4
Transport Equipment Operatives	10.7	9.4
Laborers, except Farm	19.3	16.0
Farmers & Farm Managers	.5	.5
Farm Laborers & Farm Foremen	8.5	8.4
Service Workers, except Private Household	8.7	7.6
Private Household	9.8	8.7

SOURCE: 1970 Census of Population.

TABLE XIII

MONTANA EMPLOYMENT 1960, 1970, 1975, and 1980 BY OCCUPATION
and
JOB OPPORTUNITIES 1970 THROUGH 1980 BY OCCUPATION

Occupation	AVERAGE EMPLOYMENT 1960	1970	1975	1980	JOB OPPORTUNITIES, 1970 - 1980 Industry Expansion	Replace-ment Needs	Total Jobs Avail.	Average Annual Openings
TOTAL	236,000	259,500	275,400	288,300	28,800	97,440	126,240	12,620
Professional, Technical & Kindred Workers	26,200	37,200	41,140	44,590	7,390	14,850	22,240	2,220
Accountants	1,340	1,980	2,360	2,720	740	650	1,390	140
Architects	140	130	140	150	20	20	40	*
Computer specialists	30	240	380	510	270	20	290	30
Computer programers	20	180	270	360	180	20	200	20
Computer systems analysts	10	40	50	60	20	0	20	*
Computer specialists, n.e.c.	-	20	60	90	70	0	70	*
Engineers	1,660	2,260	2,480	2,650	390	240	630	60
Chemical	30	70	60	60	0	10	10	*
Civil	740	930	1,000	1,050	120	120	240	20
Electrical & electronic	350	490	560	630	140	40	180	20
Industrial	70	120	140	150	30	10	40	*
Mechanical	120	140	150	150	10	10	20	*
Metallurgical & materials	10	30	50	60	30	0	30	*
Mining	70	80	90	100	20	10	30	*
Petroleum	60	40	50	60	20	0	20	*
Sales	60	60	60	60	0	10	10	*
Engineers, n.e.c.	150	300	320	330	30	30	60	*
Farm management advisors	110	150	180	210	60	40	100	10
Foresters & conservationists	760	1,020	1,220	1,410	390	300	690	70
Home management advisors	-	40	50	60	20	10	30	*
Lawyers & judges	830	930	980	1,010	80	250	330	30
Judges	60	100	100	90	0	30	30	*
Lawyers	770	830	880	920	90	220	310	30

* *Less than 10.*

Occupation	AVERAGE EMPLOYMENT 1960	1970	1975	1980	JOB OPPORTUNITIES, 1970 - 1980 Industry Expansion	Replacement Needs	Total Jobs Avail.	Average Annual Openings
Librarians, archivists, curators	260	620	690	750	130	580	710	70
Librarians	250	600	650	690	90	560	650	70
Archivists & curators	10	20	40	60	40	20	60	*
Mathematical specialists, including actuaries,mathematicians,statisticians	30	50	70	90	40	60	100	10
Life & physical scientists	790	840	890	920	80	140	220	20
Agricultural	120	160	190	210	50	30	80	*
Atmospheric & space	-	100	170	240	140	20	160	20
Biological	120	150	150	150	0	20	20	*
Chemists	200	170	150	120	-50 0	30	30	*
Geologists	310	230	190	140	-90 0	40	40	*
Marine	-	20	40	60	40	0	40	*
Life & physical, n.e.c.	40	10	-	-	-10 0	0	0	0
Operations & systems researchers & analysts	60	-	-	-	0	0	0	0
Personnel & labor relations workers	290	670	820	980	310	200	510	50
Physicians,dentists, & rel. practitioners	1,740	1,820	1,930	2,010	190	540	730	70
Chiropractors	100	90	110	130	40	30	70	*
Dentists	360	330	360	380	50	100	150	20
Optometrists	90	130	160	180	50	20	70	*
Pharmacists	380	350	330	300	0	90	90	*
Physicians,medical & osteopathic	670	770	820	870	100	270	370	40
Podiatrists	30	30	30	30	0	10	10	*
Veterinarians	110	120	120	120	0	20	20	*
Registered nurses,dietitians,therapists	3,000	3,580	3,950	4,270	690	2,200	2,890	290
Dietitians	70	150	150	150	0	100	100	10
Registered nurses	2,830	3,140	3,450	3,710	570	1,920	2,490	250
Therapists	100	290	350	410	120	180	300	30
Health technologists,technicians	520	900	1,160	1,390	490	480	970	100
Clinical laboratory technologists & technicians	240	410	480	540	130	220	350	40
Dental hygienists	30	10	10	10	0	10	10	*

* *Less than 10.*

Occupation	AVERAGE EMPLOYMENT 1960	1970	1975	1980	JOB OPPORTUNITIES, 1970 - 1980 Industry Expansion	Replacement Needs	Total Jobs Avail.	Average Annual Openings
Health record technologists,technicians	30	20	30	30	10	10	20	*
Radiologic technologists,technicians	170	210	240	270	60	110	170	20
Therapy assistants	-	20	40	60	40	10	50	*
Health technologists,technicians,n.e.c.	50	230	360	480	250	120	370	40
Religious workers	1,120	1,190	1,230	1,260	70	310	380	40
Clergymen	940	1,000	1,030	1,050	50	260	310	30
Religious workers, n.e.c.	180	190	200	210	20	50	70	*
Social scientists	100	210	240	270	60	50	110	10
Economists	70	130	140	150	20	30	50	*
Psychologists	30	50	70	90	40	10	50	*
Urban & regional planners	-	30	30	30	0	10	10	*
Social and recreation workers	270	830	1,000	1,160	330	380	710	70
Social	190	640	770	890	250	290	540	50
Recreation	80	190	230	270	80	90	170	20
Teachers, college & university	890	2,120	2,310	2,470	350	560	910	90
Biology	40	90	90	90	0	20	20	*
Chemistry	40	100	100	90	0	30	30	*
Engineering	50	70	80	90	20	20	40	*
Physics	50	30	30	30	0	10	10	*
Other life & physical sciences	30	100	130	150	50	30	80	*
Mathematics	50	110	120	130	20	30	50	*
Economics	20	40	50	60	20	10	30	*
English	80	130	140	150	20	30	50	*
History	40	60	60	60	0	20	20	*
Miscellaneous social sciences	30	140	150	150	10	40	50	*
Other specified teachers	240	750	810	870	120	190	310	30
Not specified teachers	220	500	550	600	100	130	230	20
Teachers, except college & university	8,660	12,080	12,490	12,770	690	6,330	7,020	700
Adult education	90	220	290	360	140	60	200	20
Elementary school	5,130	6,560	6,760	6,880	320	3,920	4,240	420
Prekindergarten & kindergarten	340	460	440	410	0	270	270	30
Secondary school	2,510	4,120	4,250	4,340	220	1,560	1,780	180
Teachers,exc.college & university,n.e.c.	590	720	750	780	60	520	580	60

* *Less than 10.*

Occupation	AVERAGE EMPLOYMENT 1960	1970	1975	1980	JOB OPPORTUNITIES, 1970 - 1980 Industry Expansion	Replace-ment Needs	Total Jobs Avail.	Average Annual Openings
Engineering & science technicians	1,590	2,140	2,460	2,750	610	240	850	80
Agriculture & biological,except health	130	140	160	180	40	20	60	*
Chemical	140	180	210	240	60	30	90	*
Draftsmen	420	450	430	410	0	40	40	*
Electrical & electronic engineering	120	280	370	450	170	20	190	20
Industrial engineering	60	10	10	10	0	0	0	0
Mechanical engineering	40	-	-	-	0	0	0	0
Surveyors	420	580	620	650	70	50	120	10
Engineering & science, n.e.c.	260	500	660	810	310	80	390	40
Technicians,except health, & engineering & science	400	710	920	1,120	410	140	550	60
Airplane pilots	110	140	160	180	40	10	50	*
Air traffic controllers	100	180	240	300	120	40	160	20
Embalmers	30	10	10	10	0	0	0	0
Radio operators	140	160	170	180	20	40	60	*
Technicians, n.e.c.	20	220	340	450	230	50	280	30
Vocational & educational counselors	90	420	530	630	210	160	370	40
Writers, artists, & entertainers	1,290	2,000	2,330	2,640	640	870	1,510	150
Athletes & kindred workers	70	170	170	180	10	50	60	*
Authors	30	20	20	30	10	20	30	*
Designers	60	110	150	180	70	40	110	10
Editors & reporters	340	350	360	360	10	330	340	30
Musicians & composers	380	380	370	360	0	120	120	10
Painters & sculptors	110	210	260	300	90	70	160	20
Photographers	140	220	260	300	80	70	150	20
Public relations men & publicity writers	60	230	280	330	100	70	170	20
Radio & television announcers	40	180	270	360	180	60	240	20
Writers,artists,entertainers,n.e.c.	60	130	190	240	110	40	150	20
Research workers, not specified	230	270	330	390	120	80	200	20
Manager & Administrators, except Farm	25,400	26,530	27,690	28,500	1,970	9,140	11,110	1,110
Assessors,controllers & treasurers, local public administration	240	430	540	650	220	310	530	50
Bank officers & financial managers	90	1,220	1,320	1,410	190	430	620	60
Buyers & shippers,farm products	300	270	260	240	0	70	70	*

* *Less than 10.*

Occupation	AVERAGE EMPLOYMENT				JOB OPPORTUNITIES, 1970 - 1980			
	1960	1970	1975	1980	Industry Expansion	Replacement Needs	Total Jobs Avail.	Average Annual Openings
Buyers, wholesale & retail trade	260	450	570	680	230	120	350	40
Credit men	170	130	140	150	20	50	70	*
Funeral directors	130	170	180	180	10	60	70	*
Health administrators	30	340	550	750	410	120	530	50
Construction inspectors,public admin.	50	40	40	30	0	30	30	*
Inspectors,exc.construction,public admin.	180	350	460	570	220	250	470	50
Federal public admin. & postal service	100	210	260	300	90	150	240	20
State public administration	70	120	160	210	90	90	180	20
Local public administration	10	20	40	60	40	10	50	*
Managers & superintendents,building	170	220	250	270	50	80	130	10
Officials & admin's,pub.admin.n.e.c.	1,320	1,520	1,730	1,920	400	1,070	1,470	150
Federal public admin. & postal service	330	440	510	570	130	310	440	40
State public administration	240	400	500	600	200	280	480	50
Local public administration	750	680	720	750	70	480	550	60
Officials of lodges,societies, & unions	180	270	320	360	90	100	190	20
Postmasters & mail superintendents	430	410	430	450	40	140	180	20
Purchasing agents & buyers, n.e.c.	160	280	330	380	100	70	170	20
Railroad conductors	460	430	410	380	0	150	150	20
Restaurant,cafeteria, & bar managers	1,320	1,570	1,740	1,890	320	1,090	1,410	140
Sales managers & dept.heads, retail trade	310	760	1,030	1,290	530	200	730	70
Sales managers,except retail trade	160	560	810	1,050	490	150	640	60
School administrators, college	40	220	230	240	20	60	80	*
School admin's,elementary & secondary	500	860	950	1,020	160	230	390	40
Managers & administrators,n.e.c.,salaried	9,870	9,910	10,360	10,690	780	2,170	2,950	300
Construction	640	1,000	1,150	1,290	290	210	500	50
Manufacturing	1,160	960	940	900	0	190	190	20
Transportation	630	680	700	720	40	150	190	20
Communications,utilities,sanitary serv.	750	600	630	650	50	130	180	20
Wholesale trade	1,140	1,270	1,350	1,410	140	300	440	40
Retail trade	2,890	3,190	3,390	3,560	370	740	1,110	110
Hardware,farm equip.,bldg.mat.retailing	560	560	540	510	0	130	130	10
General merchandise stores	400	400	410	410	10	90	100	10

* *Less than 10.*

Occupation	AVERAGE EMPLOYMENT 1960	1970	1975	1980	JOB OPPORTUNITIES, 1970 - 1980 Industry Expansion	Replace-ment Needs	Total Jobs Avail.	Average Annual Openings
Food stores	470	470	460	450	0	110	110	10
Motor vehicles,accessories retailing	450	650	760	870	220	150	370	40
Gasoline service stations	270	380	450	510	130	90	220	20
Apparel & accessories stores	190	130	110	90	0	30	30	*
Furniture,home furnishings,equip.stores	150	180	210	240	60	40	100	10
Other retail trade	400	420	450	480	60	100	160	20
Finance,insurance, & real estate	1,170	510	410	310	0	100	100	10
Business & repair services	230	290	330	360	70	60	130	10
Personal services	430	670	780	890	220	140	360	40
All other industries	830	740	680	600	0	150	150	20
Managers & admin's,n.e.c.,self-employed	9,030	6,120	5,040	3,900	0	2,190	2,190	220
Construction	1,030	890	800	720	0	160	160	20
Manufacturing	560	390	320	240	0	140	140	10
Transportation	240	160	140	120	0	60	60	*
Communications,utilities,sanitary serv.	50	20	30	30	10	10	20	*
Wholesale trade	570	310	250	180	0	130	130	10
Retail trade	4,020	2,800	2,270	1,710	0	1,140	1,140	110
Hardware,farm equip.,bldg.mat.retailing	640	270	210	150	0	110	110	10
General merchandise stores	200	140	110	90	0	60	60	*
Food stores	770	580	440	300	0	240	240	20
Motor vehicles,accessories retailing	310	200	150	90	0	80	80	*
Gasoline service stations	860	690	600	510	0	280	280	30
Apparel & accessories stores	290	150	110	60	0	60	60	*
Furniture,home furnishings,equip.stores	230	220	220	210	0	90	90	*
Other retail trade	720	550	430	300	0	220	220	20
Finance,insurance & real estate	520	200	130	60	0	70	70	*
Business & repair services	380	280	200	120	0	100	100	10
Personal services	1,090	920	810	690	0	330	330	30
All other industries	570	150	90	30	0	50	50	*
Sales Workers	15,920	17,140	17,680	18,000	860	6,630	7,490	750
Advertising agents & salesmen	100	180	240	300	120	40	160	20

* *Less than 10.*

Occupation	AVERAGE EMPLOYMENT 1960	1970	1975	1980	JOB OPPORTUNITIES, 1970 - 1980 Industry Expansion	Replacement Needs	Total Jobs Avail.	Average Annual Openings
Auctioneers	40	40	40	30	0	20	20	*
Demonstrators	80	150	200	240	90	80	170	20
Hucksters & peddlers	110	750	950	1,140	390	400	790	80
Insurance agents,brokers,underwriters	1,240	1,600	1,820	2,000	400	340	740	70
Newsboys	760	1,090	1,280	1,460	370	340	710	70
Real estate agents & brokers	600	610	650	690	80	250	330	30
Stock & bond salesmen	160	210	240	270	60	120	180	20
Salesmen & sales clerks,n.e.c.	12,830	12,510	12,260	11,870	0	5,040	5,040	500
Sales representatives manufacturing ind.	930	690	550	410	0	90	90	*
Sales representatives wholesale trade	1,510	2,080	2,430	2,750	670	350	1,020	100
Sales clerks, retail trade	8,030	7,430	7,010	6,520	0	3,950	3,950	400
Salesmen, retail trade	1,630	1,760	1,840	1,890	130	540	670	70
Salesmen of services & construction	730	550	430	300	0	110	110	10
Clerical & Kindred Workers	27,740	37,360	43,710	49,550	12,190	18,870	31,060	3,110
Bank tellers	440	770	960	1,140	370	100	470	50
Billing clerks	120	250	320	380	130	90	220	20
Bookkeepers	4,810	6,460	7,440	8,340	1,880	2,240	4,120	410
Cashiers	1,280	2,350	3,000	3,620	1,270	320	1,590	160
Clerical supervisors,n.e.c.	150	350	480	600	250	160	410	40
Collectors, bill & account	130	150	180	210	60	50	110	10
Counter clerks, except food	340	910	1,270	1,620	710	800	1,510	150
Dispatchers & starters, vehicle	110	240	310	380	140	110	250	20
Enumerators & interviewers	310	510	630	750	240	240	480	50
Estimators & investigators, n.e.c.	560	710	790	870	160	330	490	50
Expediters & production controllers	400	120	120	120	0	50	50	*
File clerks	200	400	530	650	250	320	570	60
Insurance adjusters,examiners,investigators	140	230	300	360	130	100	230	20
Library attendants & assistants	110	530	810	1,080	550	240	790	80
Mail carriers, post office	770	920	1,010	1,080	160	180	340	30
Mail handlers,except post office	180	240	270	300	60	50	110	10
Messengers,including telegraph & office boys	210	160	140	120	0	70	70	*
Meter readers, utilities	110	190	250	300	110	90	200	20

* *Less than 10.*

Occupation	AVERAGE EMPLOYMENT 1960	1970	1975	1980	JOB OPPORTUNITIES, 1970 - 1980 Industry Expansion	Replace-ment Needs	Total Jobs Avail.	Average Annual Openings
Office machine operators	640	920	1,180	1,430	510	760	1,270	130
Bookkeeping & billing machine	110	170	190	210	40	150	190	20
Calculating machine	80	20	30	30	10	20	30	*
Computer & peripheral equipment	10	180	300	410	230	150	380	40
Duplicating machine	20	40	50	60	20	30	50	*
Keypunch	330	470	580	690	220	380	600	60
Tabulating machine	40	-	-	-	0	0	0	0
Office machine, n.e.c.	50	40	30	30	0	30	30	*
Payroll & timekeeping clerks	160	230	300	360	130	150	280	30
Postal clerks	840	1,090	1,230	1,350	260	220	480	50
Proofreaders	40	40	30	30	0	20	20	*
Real estate appraisers	70	160	220	270	110	70	180	20
Receptionists	480	990	1,280	1,560	570	710	1,280	130
Secretaries	3,640	6,900	8,870	10,770	3,870	5,120	8,990	900
Shipping & receiving clerks	350	530	660	780	250	240	490	50
Statistical clerks	390	550	640	720	170	250	420	40
Stenographers	1,590	1,000	1,060	1,110	110	700	810	80
Stock clerks & storekeepers	640	840	970	1,080	240	380	620	60
Teacher aides, except school monitors	50	710	780	840	130	320	450	40
Telegraph operators	340	290	270	240	0	130	130	10
Telephone operators	1,430	1,190	1,220	1,230	40	800	840	80
Ticket, station & express agents	460	360	290	210	0	160	160	20
Typists	1,010	1,960	2,520	3,050	1,090	1,450	2,540	250
Weighers	110	110	100	90	0	50	50	*
Miscellaneous clerical workers	890	1,030	1,120	1,190	160	460	620	60
Not specified clerical workers	4,240	2,970	2,160	1,320	0	1,340	1,340	130
Craftsmen & Kindred Workers	30,860	32,530	34,420	35,900	3,370	6,060	9,430	940
Automobile accessories installers	20	20	30	30	10	0	10	*
Bakers	380	380	370	360	0	90	90	*
Blacksmiths, forgemen & hammermen	120	70	50	30	0	10	10	*
Boilermakers	170	240	290	330	90	40	130	10
Bookbinders	70	50	40	30	0	10	10	*
Brickmasons & stonemasons	310	270	240	210	0	30	30	*

* *Less than 10.*

Occupation	AVERAGE EMPLOYMENT				JOB OPPORTUNITIES, 1970 - 1980			
	1960	1970	1975	1980	Industry Expansion	Replacement Needs	Total Jobs Avail.	Average Annual Openings
Bulldozer operators	520	500	510	510	10	80	90	*
Cabinetmakers	180	140	100	60	0	30	30	*
Carpenters	4,070	3,490	3,380	3,230	0	790	790	80
Carpet installers	90	100	110	120	20	10	30	*
Cement & concrete finishers	120	140	150	150	10	30	40	*
Compositors & typesetters	590	510	460	410	0	100	100	10
Cranemen, derrickmen & hoistmen	360	660	830	990	330	110	440	40
Decorators & window dressers	130	200	240	270	70	40	110	10
Dental laboratory technicians	60	50	60	60	10	10	20	*
Electricians	1,170	1,470	1,640	1,800	330	240	570	60
Electric power linemen & cablemen	380	530	610	690	160	50	210	20
Electrotypers & stereotypers	40	10	-	-	0	0	0	0
Engravers, except photoengravers	10	10	20	30	20	0	20	*
Excavating, grading, & road machine operators, except bulldozer	1,280	1,800	2,100	2,380	580	290	870	90
Floor layers, except tile setters	70	100	130	150	50	10	60	*
Foremen, n.e.c.	3,610	3,840	3,940	4,000	160	780	940	90
Construction	540	650	720	780	130	140	270	30
Manufacturing	1,050	1,140	1,190	1,220	80	220	300	30
Durable goods	710	820	880	920	100	160	260	30
Nondurable goods,incl.not spec. mfg.	340	320	310	300	0	60	60	*
Transportation, communications, & other public utilities	950	690	510	330	0	140	140	10
All other industries	1,070	1,360	1,520	1,670	310	280	590	60
Furniture & wood finishers	20	20	30	30	10	10	20	*
Glaziers	80	80	80	90	10	10	20	*
Heat treaters, annealers, & temperers	20	-	-	-	0	0	0	0
Inspectors,scalers & graders,log & lumber	310	330	330	330	0	60	60	*
Inspecters n.e.c.	450	500	510	510	10	90	100	10
Construction	20	120	170	210	90	20	110	10
Railroads & railway express service	280	230	200	180	0	40	40	*
Other inspectors	150	150	140	120	0	30	30	*
Jewelers & watchmakers	120	100	100	90	0	20	20	*

* *Less than 10.*

Occupation	AVERAGE EMPLOYMENT 1960	1970	1975	1980	JOB OPPORTUNITIES, 1970 - 1980 Industry Expansion	Replace-ment Needs	Total Jobs Avail.	Average Annual Openings
Locomotive engineers	670	680	670	650	0	150	150	20
Locomotive firemen	380	110	100	90	0	20	20	*
Machinists	920	800	700	600	0	160	160	20
Mechanics & repairmen	7,610	9,230	10,420	11,490	2,260	1,500	3,760	380
Air conditioning, heating, refrigeration	120	210	270	330	120	50	170	20
Aircraft	130	130	140	150	20	10	30	*
Automobile body repairmen	330	580	740	890	310	90	400	40
Automobile mechanics	2,610	3,470	3,990	4,460	990	540	1,530	150
Data processing machine repairmen	-	40	80	120	80	10	90	*
Farm implement	120	520	650	780	260	90	350	40
Heavy equipment mechanics, incl. diesel	840	1,740	2,070	2,370	630	300	930	90
Household appliance & accessory installers & mechanics	260	500	660	810	310	90	400	40
Office machine	70	120	140	150	30	20	50	*
Radio & television	330	500	580	650	150	60	210	20
Railroad & car shop	670	580	500	410	0	100	100	10
Miscellaneous mechanics & repairmen	570	540	430	310	0	90	90	*
Not specified mechanics & repairmen	1,560	300	170	60	0	50	50	*
Millers, grain, flour & feed	40	30	30	30	0	10	10	*
Millwrights	190	260	310	360	100	50	150	20
Molders, metal	30	40	30	30	0	10	10	*
Motion picture projectionists	120	100	100	90	0	20	20	*
Opticians & lens grinders, polishers	80	150	170	180	30	30	60	*
Painters, construction & maintenance	890	650	600	540	0	130	130	10
Paperhangers	50	10	10	10	0	0	0	0
Photoengravers & lithographers	30	20	20	30	10	0	10	*
Piano & organ tuners, repairmen	10	20	30	30	10	0	10	*
Plasterers	110	30	30	30	0	10	10	*
Plumbers & pipe fitters	1,000	1,170	1,270	1,360	190	250	440	40
Power station operators	180	100	80	60	0	30	30	*
Pressmen & plate printers, printing	100	190	230	270	80	20	100	10
Roofers & slaters	100	80	70	60	0	10	10	*
Sheetmetal workers & tinsmiths	330	300	290	270	0	40	40	*

* *Less than 10.*

Occupation	AVERAGE EMPLOYMENT 1960	1970	1975	1980	JOB OPPORTUNITIES, 1970 - 1980 Industry Expansion	Replace-ment Needs	Total Jobs Avail.	Average Annual Openings
Shipfitters	20	-	-	-	0	0	0	0
Shoe repairmen	140	90	80	60	0	20	20	*
Sign painters & letterers	80	60	60	60	0	10	10	*
Stationary engineers	1,360	1,180	1,080	960	0	360	360	40
Structural metal craftsmen	90	260	370	480	220	60	280	30
Tailors	80	40	30	30	0	20	20	*
Telephone installers & repairmen	740	560	520	480	0	60	60	*
Telephone linemen & splicers	200	250	280	310	60	20	80	*
Tile setters	110	70	70	60	0	10	10	*
Tool & die makers	30	30	30	30	0	0	0	0
Upholsterers	130	180	210	240	60	80	140	10
Craftsmen & kindred workers, n.e.c.	290	230	180	120	0	40	40	*
Operatives, Except Transport	16,910	18,380	18,350	18,290	0	3,750	3,750	380
Asbestos & insulation workers	70	70	80	90	20	10	30	*
Assemblers	240	200	160	120	0	30	30	*
Blasters & powdermen	20	50	50	60	10	10	20	*
Bottling & canning operatives	110	50	40	30	0	0	0	0
Chainmen, rodmen, & axmen, surveying	60	240	260	270	30	20	50	*
Checkers,examiners,& inspectors,manufacturing	190	200	190	180	0	50	50	*
Clothing ironers & pressers	590	410	350	300	0	120	120	10
Cutting operatives, n.e.c.	160	240	290	330	90	220	310	30
Dressmakers & seamstresses,except factory	440	330	260	180	0	310	310	30
Drillers, earth	520	500	480	450	0	60	60	*
Dry wall installers & lathers	180	70	60	60	0	10	10	*
Filers, polishers, sanders, & buffers	150	140	130	120	0	30	30	*
Furnacemen, smeltermen, & pourers	600	710	760	810	100	160	260	30
Garage workers & gas station attendants	1,610	2,400	2,560	2,700	300	270	570	60
Graders & sorters, manufacturing	20	110	140	180	70	120	190	20
Produce graders & packers,exc.factory,farm	130	50	40	30	0	20	20	*
Laundry & drycleaning operatives,n.e.c.	550	790	830	870	80	230	310	30
Meat cutters & butchers,except mfg.	710	620	560	510	0	100	100	10
Meat cutters & butchers, manufacturing	240	390	440	480	90	70	160	20
Meat wrappers, retail trade	30	150	180	210	60	60	120	10

* *Less than 10.*

Occupation	AVERAGE EMPLOYMENT 1960	1970	1975	1980	JOB OPPORTUNITIES, 1970 - 1980 Industry Expansion	Replacement Needs	Total Jobs Avail.	Average Annual Openings
Milliners	-	20	20	30	10	10	20	*
Mine operatives, n.e.c.	2,640	1,760	1,180	600	0	290	290	30
Mixing operatives	100	110	110	120	10	10	20	*
Oilers & greasers, except auto	210	380	490	600	220	40	260	30
Packers & wrappers, except meat & produce	420	490	530	570	80	190	270	30
Painters, manufactured articles	60	80	80	90	10	30	40	*
Photographic process workers	90	130	160	190	60	20	80	*
Precision machine operatives	160	150	150	160	10	30	40	*
Drill press operatives	10	-	-	-	0	0	0	0
Grinding machine operatives	60	60	60	60	0	10	10	*
Lathe & milling machine operatives	70	90	90	100	10	20	30	*
Precision machine operatives, n.e.c.	20	-	-	-	0	0	0	0
Punch & stamping press operatives	80	90	90	90	0	20	20	*
Sawyers	900	1,190	1,310	1,430	240	170	410	40
Sewers & stitchers	140	350	370	380	30	240	270	30
Stationary firemen	330	430	500	570	140	100	240	20
Textile operatives	20	40	50	60	20	0	20	*
Welders & flamecutters	740	1,250	1,400	1,530	280	200	480	50
Winding operatives n.e.c.	60	10	-	-	0	0	0	0
Miscellaneous & not specified operatives	4,340	4,180	4,050	3,890	0	500	500	50
Machine operatives, misc. specified	1,380	2,010	2,370	2,720	710	240	950	100
Machine operatives not specified	570	350	220	90	0	50	50	*
Miscellaneous operatives	1,620	1,310	1,100	870	0	150	150	20
Not specified operatives	770	510	360	210	0	60	60	*
Transport Equipment Operatives	9,230	9,660	9,880	10,000	340	1,430	1,770	180
Bus drivers	510	750	820	890	140	240	380	40
Deliverymen & routemen	1,470	1,810	1,970	2,100	290	220	510	50
Fork lift & tow motor operatives	350	480	540	600	120	90	210	20
Motormen;mine,factory,logging camp,etc.	210	120	90	60	0	10	10	*
Parking attendants	140	40	40	30	0	10	10	*
Railroad brakemen	520	570	600	630	60	100	160	20
Railroad switchmen	480	500	520	540	40	90	130	10

* *Less than 10.*

Occupation	AVERAGE EMPLOYMENT 1960	1970	1975	1980	JOB OPPORTUNITIES, 1970 - 1980 Industry Expansion	Replacement Needs	Total Jobs Avail.	Average Annual Openings
Taxicab drivers & chauffeurs	220	200	210	210	10	50	60	*
Truck drivers	5,330	5,190	5,090	4,940	0	620	620	60
Laborers, Except Farm	12,480	12,170	11,960	11,590	0	1,940	1,940	190
Animal caretakers, except farm	100	310	430	540	230	80	310	30
Carpenters' helpers	100	170	210	240	70	20	90	*
Construction laborers,exc.carpenters'help	2,370	2,090	1,940	1,760	0	270	270	30
Fishermen & oystermen	10	50	70	90	40	10	50	*
Freight & material handlers	1,830	1,840	1,840	1,830	0	160	160	20
Garbage collectors	140	180	180	180	0	40	40	*
Gardeners & groundskeepers,except farm	730	760	770	780	20	180	200	20
Lumbermen, raftsmen, woodchoppers	900	750	660	570	0	180	180	20
Stock handlers	1,140	1,730	2,090	2,430	700	150	850	80
Teamsters	220	170	130	90	0	40	40	*
Vehicle washers & equipment cleaners	430	260	190	120	0	60	60	*
Warehousemen, n.e.c.	490	630	720	780	150	150	300	30
Miscellaneous & not specified laborers	4,020	3,230	2,730	2,180	0	600	600	60
Farmers and Farm Managers	26,570	19,710	18,130	16,330	? 0	7,610	7,610	760
Farmers, owners & tenants	26,390	17,970	15,850	13,550	-4920 0	6,940	6,940	690
Farm managers	180	1,740	2,280	2,780	? 1,040	670	1,710	170
Farm Laborers and Farm Foremen	13,230	10,500	10,520	10,530	30	2,890	2,920	290
Farm foremen	310	540	680	810	270	140	410	40
Farm laborers, wage workers	10,950	8,220	8,260	8,290	70	2,150	2,220	220
Farm laborers, unpaid family workers	1,890	1,710	1,570	1,430	0	590	590	60
Farm service laborers, self-employed	80	30	10	-	0	10	10	*
Service Workers, Except Private Household	25,910	34,690	39,160	43,160	8,470	21,130	29,600	2,960
Cleaning service workers	5,550	8,280	9,190	9,980	1,700	4,590	6,290	630
Chambermaids & maids,exc.priv.household	810	1,340	1,570	1,790	450	1,020	1,470	150

* *Less than 10.*

Occupation	AVERAGE EMPLOYMENT 1960	1970	1975	1980	JOB OPPORTUNITIES, 1970 - 1980 Industry Expansion	Replace-ment Needs	Total Jobs Avail.	Average Annual Openings
Cleaners & charwomen	990	1,790	2,000	2,180	390	920	1,310	130
Janitors & sextons	3,750	5,150	5,620	6,010	860	2,650	3,510	350
Food service workers	11,700	14,940	16,440	17,740	2,800	9,230	12,030	1,200
Bartenders	2,130	2,110	2,080	2,030	0	1,300	1,300	130
Busboys	250	330	380	420	90	20	110	10
Cooks, except private household	3,500	4,470	4,950	5,380	910	2,720	3,630	360
Dishwashers	510	1,130	1,420	1,700	570	60	630	60
Food counter & fountain workers	370	460	520	570	110	360	470	50
Waiters & waitresses	3,860	5,180	5,740	6,230	1,050	4,000	5,050	500
Food serv.workers,n.e.c.,exc.priv.hsehd.	1,080	1,260	1,350	1,410	150	770	920	90
Health service workers	3,230	4,710	5,740	6,700	1,990	3,550	5,540	550
Dental assistants	180	210	240	270	60	150	210	20
Health aides, except nursing	150	410	570	720	310	290	600	60
Health trainees	210	10	10	-	0	10	10	*
Nursing aides, orderlies, attendants	2,060	3,250	3,960	4,630	1,380	2,500	3,880	390
Practical nurses	630	830	960	1,080	250	600	850	80
Personal service workers	3,340	4,290	5,110	5,880	1,590	3,200	4,790	480
Airline stewardesses	40	-	-	-	0	0	0	0
Attendants, recreation & amusement	320	450	540	630	180	300	480	50
Attendants, personal service, n.e.c.	240	190	160	120	0	130	130	10
Baggage porters & bellhops	60	60	60	60	0	40	40	*
Barbers	770	560	430	300	0	380	380	40
Boarding & lodging house keepers	420	50	40	30	0	30	30	*
Bootblacks	40	10	-	-	0	10	10	*
Child care workers,exc.private household	100	750	1,160	1,560	810	510	1,320	130
Elevator operators	120	70	50	30	0	50	50	*
Hairdressers & cosmetologists	820	1,450	1,830	2,190	740	1,290	2,030	200
Housekeepers,except private household	260	450	540	630	180	300	480	50
School monitors	10	60	60	60	0	40	40	*
Ushers, recreation & amusement	140	80	60	30	0	50	50	*
Welfare service aides	-	110	180	240	130	70	200	20

* *Less than 10.*

Occupation	AVERAGE EMPLOYMENT 1960	1970	1975	1980	JOB OPPORTUNITIES, 1970 - 1980 Industry Expansion	Replace-ment Needs	Total Jobs Avail.	Average Annual Openings
Protective service workers	2,090	2,470	2,680	2,860	390	560	950	100
Crossing guards & bridge tenders	20	20	30	30	10	0	10	*
Firemen - fire protection	340	380	400	410	30	30	60	*
Guards & watchmen	670	710	710	720	10	320	330	30
Marshals & constables	30	40	40	30	0	10	10	*
Police & detectives	760	1,000	1,150	1,290	290	130	420	40
Sheriffs & bailiffs	270	320	350	380	60	70	130	10
Private Household Workers	5,550	3,630	2,760	1,860	0	3,140	3,140	310
Child care workers, private household	3,020	2,060	1,570	1,050	0	1,780	1,780	180
Cooks, private household	70	30	30	30	0	30	30	*
Housekeepers, private household	430	400	380	360	0	350	350	40
Laundresses, private household	170	40	20	-	0	30	30	*
Maids & servants, private households	1,860	1,100	760	420	0	950	950	100

* *Less than 10.*

APPENDIX II

METHODOLOGY

1975 and 1980 Employment by Industry

Projections of employment in 1975 and 1980 for the State of Montana began with an intensive study and analysis of employment levels in the past. Detailed historical series by industry were available from 1957 to 1971, which is close to the minimum period upon which any kind of valid assumptions can be made.

The basic method employed to project 1975 and 1980 employment levels was a technique known as the simple least squares regression. It was felt that this method would result in the best reliability without being extremely complicated and consequently expensive to produce. The major disadvantage of this method is that the use of only one variable to explain changes in local industry employment may not result in a truly accurate picture of future employment. As a result, indicated employment in each industry was tempered with factual opinions about the industry insofar as possible. The end product is, within the limitations of the data, a reasonably reliable picture of the relative magnitude of Montana's employment by industry and occupation in 1975 and 1980.

Experiments with several variables as related to employment resulted in the use of a relationship of state employment to the logarithm of national employment. This produced the least amount of unexplained variation within the series.

A least squares regression was computed for each major industry by two-digit SIC code with the exception of the All Other Nonagricultural category, and Contract Construction which required a different technique when it became evident that local industry changes were not comparable to national changes.

A projection of 1975 employment by industry was obtained by injecting the logarithm of 1975 projected national employment figures from "Tomorrow"s Manpower Needs", Supplement No. 2, into the regression formula. Employment

by industry for 1980 was calculated similarly, using the logarithm of 1980 projected national employment obtained from the BLS National Industry - Occupational Matrix, furnished by the Bureau of Labor Statistics. The next step was to compute the regression coefficient for each industry and determine the percent of explained variation. Explained variation ranged from 99.0 percent for Railroads, Class I only, to 57.3 percent for Federal employment. The majority, nine industries, occurred in the nineties, two in the eighties, three in the seventies, and two in the high sixties. Computed value of "t" for all industries exceeded the theoretical "t" value at 1 percent probability and 13 degrees of freedom. However, because the explained variation percentage was low for Federal Government and Manufacturing of Durable and Nondurable Goods and, in both cases, total Government and total Manufacturing produced reliable results, the two sub-industries were computed as a residual. Total Transportation and Public Utilities had a very low explained variation, but its two sub-industries had extremely high values and their sum was used in the total Transportation and Public Utilities category. After adjustment for auto-correlation, Nonagricultural Wage and Salary employment was determined to be an estimated 216,400 persons by 1975 and 229,800 by 1980. (Refer to Table I)

Contract Construction and All Other Nonagricultural Employment had to be treated atypically due to lack of a significant relationship to any one variable. However, in the case of Contract Construction, variation of annual average employment from mean employment for the fifteen year period was never more than 600 people. The standard error of the mean for Contract Construction was calculated to be 1.40 percent at one standard deviation with a coefficient of variation of 5.60%. On this basis, the mean value was used as an estimate of 1975 and 1980 employment. Extensive study of employment in All Other Nonagricultural

Industries revealed that, according to national and Montana 1970 Census data, previous estimates should be revised downward to 25,000 for 1975 and 1980.

1975 and 1980 Employment by Occupation

Industry employment for 1975 and 1980 was first adjusted by distribution of the All Other Nonagricultural Employment and Government categories to match the Bureau of Labor Statistics national occupational matrix (Table IX) Because the national staffing pattern differed considerably from the Montana 1970 Census staffing pattern, only the rate of change for each occupation was used to determine 1975 and 1980 occupational employment levels. In all cases, forecast occupational employment levels were cross-checked with current known conditions and adjusted as necessary.

1970 to 1980 Replacement Needs

Replacement needs were calculated on the basis of separation rates for occupations in the state of Montana, furnished by the Regional Office of the Bureau of Labor Statistics, and based on 1970 Census Age Distribution and 1972 Age-Specific Rates.

Emerging Occupations and Preciseness of the Data

As a footnote to the above methodology statement, some mention of two factors which usually concern users of forecast data is in order. These two questions concern "emerging occupations" and the preciseness of the data.

Emerging Occupations - Past experience with analysis of the labor market, both nationally and in Montana, has shown that the job structure changes rather slowly and the overwhelming number of job opportunities which will occur during the normal forecast period are in already existing occupations. In most cases by the time a substantial number of opportunities exist in these "emerging occupations", the occupation itself has become an identifiable part of the job market.

Preciseness of the Data - A technique which produces precise, or reasonably precise, long-range forecasts is, of course, desirable. However, in most cases attempting to obtain absolute figures results in diminishing returns in terms of cost and time involved. Extensive and involved surveys of current and future conditions are, at best, time consuming, costly, and result in data which may or may not be reliable. Because of the cost involved, planners are "locked in" to the same data for several years.

With this in mind, it was felt that the most important factors in which both counselors and manpower planners are concerned are more the relative magnitude and direction of employment and occupational changes rather than absolute numbers. Consequently, the method used herein was chosen as it produced these two criteria and is easily updated at frequent intervals as economic conditions change.

APPENDIX III

ECONOMIC ASSUMPTIONS

The employment projections contained in this document are based on the assumption that Montana's economy will continue to parallel national economic trends as has been the case during the last fifteen years. The growth of Montana's economy and likewise its work force has for years been slow and steady, yet lagging behind in comparison to the national rate of growth. Montana's large land area, sparse population and distance from major marketing centers basically account for this lag in rate of growth, a trend expected to continue throughout the decade of the seventies.

The effect of presidential national economic policies, including economic reforms and revisions in manpower programs, is difficult to evaluate at this time. However, Montana is expected to continue its slow recovery from the 1969 to 1970 economic recession, handicapped by its lack of primary industry, a factor contributing to extreme seasonality in employment and a higher than normal unemployment rate.

Montana's services and wholesale and retail trades are projected to experience the greatest growth in employment for the 1970 to 1980 period, followed by government employment. Mining employment can be expected to stabilize or undergo a slight decline unless environmental concerns can be satisfied and extensive strip mining of Montana coal takes place. Agricultural employment also should remain static or decline slightly, with occupational emphasis changed from unskilled workers to skilled farm mechanics. All other industries should exhibit slow to moderate growth, in keeping with normal business expansion.

Nationally, the target years of 1975 and 1980 are assumed to be under peacetime conditions, similar to those prior to the Viet Nam buildup. In addition, during the forecast period it is assumed that:

1. No war or other catastrophic event will seriously alter the current rate and nature of economic growth.

2. Scientific and technological advances will continue at about the same rate as in recent years.

3. Current economic conditions, as well as patterns of consumption, will continue to change at about the same rate as in the recent past.